



ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

The Water Services and Institutional Support Project (WASIS II)



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EXECUTIVE SUMMARY

Program Outline

In 2015 the Investment Fund and Water Supply Asset Holder (FIPAG) prepared the second phase of the Water Services and Institutional Support Project (WASIS II) to be financed through a credit facility from the International Development Association (IDA) over a period of approximately 6 years. The WASIS II project was a follow-up from the WASIS I project closed on October 31, 2015. The objective of WASIS II Project was to improve the performance, sustainability and coverage of water supply and related services in the major cities in Mozambique, namely Beira, Dondo, Chimoio, Manica, Gondola, Tete, Moatize, Pemba and Nacala. The project was to benefit approximately 105,000 households (556,500 people) in the project Cities who will be directly connected to the formal water supply system and have access to treated, piped water.

The project was presented to the Board with a financing gap, with a total requested amount of US\$ 146 million to fund water infrastructure investments and institutional strengthening support for five target cities of Pemba, Beira, Dondo, Tete and Moatize. However, due to the financing limitations, only US\$ 90 million was made available from IDA 17. The remaining US\$ 56 million represented the financing gap for undertaking the planned investments for network expansions in Tete and Moatize (combined population of 263,000), experiencing rapid economic growth as a result of growth of the mining industry. The government of Mozambique (GoM) then agreed that investments in Tete and Moatize would not commence until this financing gap was filled, and that the project would be restructured to realign the activities if the financing gap did not materialize under IDA 18.

Water supply Rehabilitation and Expansion to Nacala – The WASIS II Additional Financing: Nacala is one of the fastest growing cities in Mozambique. Recent industrial developments in Nacala port have triggered significant urban influx and economic activities, putting additional pressure on the strained water supply system. Nacala’s main water supply consists of a water treatment plant and transmission main from the Nacala Dam. It is at an advanced stage of degradation, with high losses between the existing intake and transmission systems and frequent breakdown in the transmission system from aging and dilapidated pipes. In order to improve water supply efficiency for Nacala, the Government has proposed the following intervention under the WASIS II Additional Financing: Urgent rehabilitation, therefore, is required in both the treatment plant and the transmission main to improve efficient and quality water supply to Nacala.

The WASIS II AF will include:

- a new water treatment plant with a capacity of 25,000 m³/day, increasing the overall production capacity in Nacala by 17,800 m³/day;
- a new transmission line to convey the water into the city; and
- rehabilitation and expansion of critical portions of the existing distribution network. These investments will increase the storage capacity of the city’s water supply system from 9,150 to 17,400 m³ and improve reliability and quality of services. Since most of the poor live in peri-urban areas in Nacala that are particularly affected by the water shortage, this increased in water supply will enhance their participation, particularly women, in local

economic activities. Overall, an additional 80,000 people are expected to benefit from the improved water supply in Nacala.

The present document is an update of the ESMF for the parent project (WASIS II), informed by the scope of activities under WASIS II Additional Financing (AF) to include Nacala. The WASIS II Additional Financing (WASIS II – AF) is prepared based on extensive literature reviews of existing documents, information gathered at proposed project area (Nacala); review of lessons learned from the implementation of the Parent Project WASIS II, Greater Maputo Water Supply Project (GMWSP); synthesis of relevant provisions from the Mozambican legal framework related to the ESMF and World Bank Safeguard Policies and guideline documents; and feedback obtained from public consultation meeting carried in Nacala.

The potential environmental and social impacts associated with the Project have been highlighted, and mitigation measures to offset the potential negative impacts have been recommended. Recommendations have also been made with regards to the need to improve FIPAG's institutional capacity to continue improving its performance in integrating environmental and social considerations in the various water supply projects (planning, construction, operation).

Study Framework

This document is the Environmental and Social Management Framework (ESMF) for WASIS II Additional Financing, covering the proposed construction of the new water treatment plant, a new water transmission line from the water treatment plant to the city of Nacala, and rehabilitation and expansion of critical portions of the existing distribution network in Nacala. The environmental evaluation and reporting on this document have been carried out taking into consideration the scope of the proposed works under parent project (WASIS II).

The specific nature of the works envisaged in the parent WASIS II program will vary from city to city and will depend on the type and the prevailing physical conditions on existing sites. It is of note that all specific investments under the WASIS II Additional Financing will require the preparation of Environmental and Social Impact Assessment (ESIA) and respective Environmental and Social Management Plan (ESMP), taking into consideration applicable national Environmental Regulations as well as the World Banks' safeguards policies and guidelines. Once the Construction Contracts have been awarded, the Contractors will be required to use the projects' ESIA's and ESMPs to prepare their own ESMP or Contractors' Environmental and Social Management Plans (C-ESMP), clearly indicating how projects' impacts will be addressed and the needed resources to ensure environmental compliance throughout the project.

The parent WASIS II project involves five components of which four are implemented by FIPAG. Activities under these components include: **a) investment in water supply production system**, with a focus on the provision of goods and civil works in the project cities such as the rehabilitation and construction of new wells, rehabilitation, expansion and construction of new water treatment plants for iron removal, amongst other works; **b) investment in water supply distribution systems**, which will include works such as increasing storage capacity, rehabilitating and construction of distribution centers, and installation of additional new water networks; **c) the provision of technical assistance to FIPAG**, with the aim of strengthening its capacity to design

and supervise the project works, as well as implement the Environmental and Social Management Plans (ESMPs) and Resettlement Action Plans (RAPs) and dam safety studies as needed, and to undertake hydrological and geophysical studies to identify new water sources, amongst others; **d) Output-Based Aid (OBA) for FIPAG cities including Maputo**, which will be managed and implemented by the Regulatory Water Council 1 (CRA).

Under WASIS II Additional Financing, the nature and scope of the investments related to increased water production and distribution, specifically, the WASIS II – AF will include:

i. Subcomponent 1a:

- a. Electromechanical equipment for the existing raw water intake that was built at the time the Nacala Dam was rehabilitated, along with 2 km of raw water transmission main from the intake to the water treatment plant.
- b. Construction of a water treatment plant with 25,000 m³/day treatment capacity, including the associated electromechanical equipment, pumping stations and a 400 m³ reservoir.
- c. Construction of a 33 km transmission main with associated booster stations, rehabilitation of existing reservoirs, as well as replacement of 10 km of the existing transmission main.

ii. Subcomponent 1b:

- a. Construction of a new distribution center and expanding the distribution network by 150 km.

In general, it is envisaged that the works will involve construction and/ rehabilitation of water supply systems, which includes the storage, transportation and distribution components.

Applicable Legal Framework

This Environmental and Social Management Framework does not and will not replace the specific Environmental and Social Impact Assessments of the parent WASIS II and the WASIS II AF sub-projects, which need to be conducted for specific aspects of the overall Project, as per the provisions of the Decree 54/2015 of December 31.

Mozambique’s Environmental Impact Assessment Regulations make provision for four categories of ESIA’s, i.e. A+, A, B and C. **Category “A+”** concerns projects with likely significant impacts and for which decision making is reserved for the central level, where a full ESIA is required to be undertaken and supervised by Independent Specialists Reviewers with verifiable experience; **Category “A”** concerns projects in which decisions are made at national level and applies to instances where a full ESIA is required; **Category “B”** is for projects decided at provincial and local levels, where a simplified ESIA can be conducted; and **Category “C”** is for small-scale projects that do not necessarily require an ESIA, but ought to follow published regulations and standards in order to minimize environmental impacts.

Based on the current understanding of the author, the exact nature of work required in each of the 9 cities has not been defined as yet, even though it is expected that most of the activities will fall under categories “B” and “C” depending on the sensitivity of the location or the extent of the proposed activities and the nature of the anticipated impacts on the biophysical and socioeconomic

¹*Conselho de Regulação de Águas* in Portuguese.

elements of the environments in the Project area. The type of construction process and/or rehabilitation works will also be a determining factor on the category of the EIA process to be followed in each city.

The current ESMF for the proposed WASIS II AF also triggers the World Bank Safeguard Policy OP 4.01 on Environmental Assessments, which stipulates measures to be taken into account to identify, avoid and mitigate potential negative environmental impacts on projects financed by the Bank.

Parallel but separate from the present ESMF, through the preparation of Resettlement Policy Framework (RPF), the proposed activities in Nacala are examined to determine the potential need for compensation for any communities that may face resettlement in line with the World Bank's OP and BP 4.12 on Involuntary Resettlements. Given the fact that the proposed civil works will mostly take place within the boundaries of existing cities, involuntary resettlements resulting from land acquisition as a result of the proposed developments are expected to be minimal. However, activities associated with the programme such as the construction of new water treatment plants, installation of water transmission main, water distribution and storage facilities could potentially trigger the need for compensation and resettlement.

The proposed activities under the WASIS II AF trigger also the OP 4.37, on Safety of Dams since the proposed water treatment plant will abstract water from the Nacala Dam infrastructure which recently benefited from rehabilitation and expansion works to increase its water storage capacity as well as strengthening the dam structure. Additionally, FIPAG also commissioned a safety inspection of the Nacala dam, to be undertaken as a separate study, with a view to determine the safety aspects of the Dam as recently expanded and rehabilitated.

Public Consultation

During the preparation of the ESMF for the parent WASIS II project, Public consultation was carried out in 6 of the 9 WASIS II Cities (Nacala-City, Tete, Moatize, Beira, Chimoio, and Pemba), with the objective of gathering public perceptions of the proposed developments. The consultation process comprised two methods (i) consultation on a one-to-one basis with key stakeholders (FIPAG, officials of line ministries, national organizations, NGOs, the World Bank and technical staff of the selected Cities), and (ii) public meetings held in the above-mentioned cities. The objective of the consultation process was to solicit general perceptions and views of all relevant stakeholders on the proposed project. Among others, the Consultant sought to ascertain general conditions in the different city contexts and determine specific impacts that would need to be addressed under the scope of the ESMF.

For the proposed WASIS II AF to include Nacala, public consultation meetings were organized and held in 15-16 of November 2018 in Nacala-a-Velha District, at the EPC of Barragem Administrative Post and in Nacala city, at Thamole Lodge. The critical issues raised and addressed by the consultants are summarized below:

Nr.	Nacala-a-Velha District	Nacala City
1	<p>Participants of at the public meeting welcomed the water supply project as they believed it will have a positive impact in terms of water supply to the local communities and the growing businesses. They wished the water project would go to the end. One of the participant questioned about the project starting date.</p>	<p>The participants welcomed the water project and congratulated FIPAG as the water project will address the water shortage in new and old areas/neighbourhoods of Nacala city.</p>
2	<p>Participants were concerned about the job opportunities and clean water access. They argued the previous project (MCA compact) did not offer enough job opportunities to local community and the job selection criteria were not clear and local leaders were not involved in the selection process. There are peoples/communities near the dam without drink water, which is according to them unacceptable. In some communities there are just one public water source and the water tariff is considered expensive for the local communities (20 Mts). They expect the water project to solve the above problems.</p>	<p>Soil Erosion was pointed out as an important issue that the water project will have to deal with. Following the installation of water pipes it was recommended to cover the furrows and replace the soil so as to minimise the impact of erosion over the water infrastructures.</p>
3	<p>There are pending resettlement issues from MCA compact. If not properly dealt by FIPAG, it may affect the current water project. As we finished the meeting, a list of Claims by 109 people was presented to FIPAG/Consultants. They complained about the loss of trees and crops during the installation of the water transmission mainly by the previous contractor, under MCA compact.</p>	<p>Participant were concerned about the supervision of the resettlement process. Lacking supervision may motivate affected/compensated people to return to the project impact areas creating future problems for water infrastructure maintenance.</p>
4	<p>People were concerned of the compensation entitlement and the type of compensation to be delivered by the project. They wanted to know if properties affected by the vibrations during the project's machine/vehicles operations, would also be eligible for compensation or not and if it would be a cash or non-cash compensation.</p>	<p>It was pointed out the need for coordination between the water entity and the municipality as there are new municipal areas that will soon need clean water.</p>

Nr.	Nacala-a-Velha District	Nacala City
5	They expressed concern about the lacking illumination in the dam infra-structure. Because of darkness the dam has been used for criminal purposes and participants asked FIPAG for the illumination.	Other concerns presented were related to job creation to local community, management of rainfall waters so as to avoid flooding the local communities and concerns over management of solid waste generated by the water project.

Environmental and Social Impacts

The types of activities expected to be carried out during the implementation phase of the WASIS II project include civil construction activities and/or the rehabilitation of infrastructure (i.e. water abstraction, transport, treatment, storage and distribution systems). It is envisaged that the bulk of the impacts associated with the proposed activities will occur during the construction/rehabilitation phases. These impacts will however be short to medium-term, localized and temporary, and will be dependent on the types of works necessary in each City. The operational phase of the water supply systems will also generate impacts that require continuous monitoring. The contractors carrying out the works will have a contractual obligation to mitigate and manage all environmental and social impacts and will therefore be obliged to ensure proper mitigation of impacts through compliance with the existing regulations and an ESMP that will be prepared for specific projects once they become known. On the other hand, FIPAG shall ensure that the Supervising Consultants monitor and supervise the work of the contractors and ensure that they comply with all contractual obligations. Additionally, FIPAG shall expand and capacitate its environmental and social safeguard team to ensure effective management of environmental and social issues associated with water supply projects at central, regional and local levels.

The anticipated impacts associated with the construction and rehabilitation activities will likely include soil erosion resulting from vegetation clearance and excavations of soils for activities such as the rehabilitation and construction of boreholes, and the installation of pipelines and/or construction of distribution centers and water treatment plants. Additional impacts will include noise and dust emissions from vehicles and the movement of machinery during the construction phase. Pollution of soils and waterways may also result from spills and leaks of fuels as well as oils and any lubricants used on the machinery and vehicles involved in construction activities. Soil erosion can be minimized by strictly restricting vegetation removal and excavations to areas where construction of infrastructures will take place. Vegetation disturbances in areas where no direct civil works are expected should be avoided. To avoid pollution of soils and waterways by fuels and lubricants, refuelling and repairs of vehicles and machinery must be conducted in appropriately designed areas. Any contaminated soils must be collected and placed in bags to ensure appropriate disposal in licensed areas or by registered licensed waste removal agents.

Secondary indirect effects will also result from both construction and rehabilitation works, especially the disruption of normal public access routes/paths, and safety issues arising from poor marking of alternative routes where normal access has been temporarily blocked due to

construction works. In order to minimize the disruption of public access routes, the proposed civil works should be carefully planned, and use of the existing access routes should be emphasized/promoted. Where the disruption of access routes is inevitable, adequate signage must be appropriately displayed to redirect traffic and pedestrians.

Operational impacts may result from lack of routine maintenance of water supply components. Water leakages, if unmonitored, can create permanent wet conditions and consequently result in the proliferation of malaria and dengue mosquitoes with negative impacts on human health in the project areas. This impact can be minimized through effective and regular monitoring and maintenance of water distribution components to ensure early identification of water leakages and repairs by system operators. Beneficiaries shall also be sensitized on adequate use and management of their water pumps and public standpipes to minimize this impact.

Other potential environmental impacts will be specific to the chosen sites. A summary table of perceived and anticipated potential environmental and social impacts as a result of the proposed development activities has been prepared. The table also includes suitable mitigation measures that need to be followed or taken into account.

With regards to the WASIS II AF to include the water supply system for the Nacala city, environmental and impacts will result from installation of the electrochemical equipment from the intake as well as associated installation of raw water transmission main to the water treatment facility. These activities may be associated with excavation of soils, vegetation clearing, soils compaction and oils and lubricants spills, hence affecting the aquatic environment. The installation of the water transmission main from the intake to the water treatment plant may impact existing crops on the route, causing socioeconomic impacts.

The site for construction of the water treatment plant may require demolition of existing structures from the uncompleted construction works. In this regards, the project will need to address the issue of demolition waste. Other impacts such as spills of oils and lubricants will result from workshops for vehicle and machinery repairs. During operation phase of the water treatment plan, the issue of management of sludge resulting from the water treatment process is critical. The project shall clearly indicate how the sludge will be managed to prevent uncontrolled deposition into the environment. The transference of retention/settling sludge to the landfill of inert material should be made to avoid any contamination of soil or water. The Contractor will need to ensure that such sites are managed effectively to prevent impacts upon the environment.

Environmental and social impacts will also result from the installation of the 33 km water transmission main. Vegetation clearance and excavation of soils may result on soil erosion, thus contributing to the natural soil erosion issue that affect the Nacala district. In addition, crops and fruit trees may be affected along the 33km route, and socioeconomic impacts are likely.

The construction of water storage tanks for distribution is likely to affect the existing infrastructures within the vicinities. Noise and vibration as well as dust emission are usually associated with construction of water storage. Similarly, the construction of the water reticulation system will impact access roads, contribute to soil erosion as well as noise, vibration and dust

emission in the neighbourhoods of the Nacala city. All these impacts shall be adequately addressed during the planning and implementation of specific projects.

In all project's subcomponents, the likely social impacts would be associated to labour influx to the project area. People from different areas may be attracted to the site with a view to obtain direct or indirect employment. This influx may trigger social conflicts, spread of HIV and AIDS, as well as crime and violence against women and children, including sexual misconducts. These social impacts may be minimized through prioritization of employment of local residents, as well as having explicit rules on contracting of labour and adoption and rolling out of code of conduct to ensure its socialization among the workforce.

Conclusions and Recommendations

It is expected that the negative environmental and social impacts associated with the proposed civil works will be medium to short-term, localized and fairly insignificant and can be mitigated through compliance with EIA Regulations and an Environmental and Social Management Plan (ESMP), as well as specific project ESMPs to be implemented by the Contractors. These factors should form part of the Contractors' ESMP.

The key impacts that are anticipated from the proposed development activities are summarized as follows:

- Contamination of soils, ground and surface water as a result of chemicals (i.e. oils, fuels and lubricants from machinery and vehicles working on sites, residues of paints, etc.) particularly on sites located near waterways. This can easily be minimized through the adoption of and implementation of an ESMP;
- Sludge resulting from water treatment process may contaminate surface and groundwater if poorly handled;
- Demolition waste shall be adequately managed at the site proposed for the construction of water treatment plant;
- Air and noise quality may be affected as a result of construction activities – This can be mitigated by following existing regulations as well as all the stipulations in the project ESMP;
- Vibration during construction works likely to affect existing structures in the vicinities;
- The spread of HIV/AIDS during the construction phase of the development may perpetuate poverty in the urban and peri-urban areas by affecting the most productive members of society – suitable mitigation measures to offset this have been proposed in this document;
- Social conflicts including increase in cases of violence against women and children as well as sexual misconduct resulting from labour influx into the project area.

Given the type of civil and construction activities envisaged in this project, it is considered unlikely that the proposed works will require any land acquisition, which could have an effect on crop production and yields of the population in the targeted areas or those living close to them. In any case, a Resettlement Policy Framework (RPF) has been prepared to establish procedures that must be followed in case of damage to public assets as a result of the civil works or associated activities.

In order to ensure effective implementation of the proposed mitigation measures, the following recommendations should be considered to guide site selection for the works:

- Identify environmental and social management priorities that are integral to the ToRs of the proposed construction/rehabilitation works;
- Conduct periodical monitoring to verify whether the proposed mitigation measures are fully implemented.

In order to address the above recommendations, the FIPAG Environmental and Social Specialist shall:

- Identify and train FIPAG personnel at all levels, from its headquarters in Maputo, to regional and city level representations, who will be responsible for monitoring of ESMPs at the city level;
- Ensure effective intra-institutional coordination between the FIPAG personnel at the national headquarters, provincial delegations and at the levels of cities to certify that appropriate implementation of the proposed mitigation measures for continual improvement in environmental and social management.

For an effective integration of the proposed mitigation measures into planning, implementation and operation of the program's activities, the implementation of Project's ESMP is the responsibility of the project proponent (FIPAG), who will ensure compliance with all measures stipulated in the ESMP by all Contractors. Furthermore, it should be mandatory that all contractors and supervisors employ experienced Environmental Specialists to ensure compliance with the ESMP.

LIST OF ACRONYMS

ARA	Regional Water Administration
BP	Bank Procedures
CRA	Regulatory Water Council
DNA	National Directorate for Water
DPTADER	Provincial Directorate of Land, Environment and Rural Development
DPOPH	Provincial Directorate of Public Works and Housing
DUAT	Land Use Right/ Title
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EO	Environmental Officer
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FIPAG	Investment Fund, Water Supply and Asset Holder (i.e. Fundo de Investimento e Património do Abastecimento de Água)
GDP	Gross Domestic Product
GMWSP	Greater Maputo Water Supply Project
GOM	Government of Mozambique
IDA	International Development Association
INE	National Statistics Institute
INGC	National Institute for Disaster Management
MDP	Municipal Development Project
MINASA	Ministry of Agriculture and Food Security
MISAU	Ministry of Health
MITADER	Ministry of Land, Environment and Rural Development
MOPHRH	Ministry of Public Works, Housing and Water Resources
NGO	Non-Governmental Organization
OBA	Output-Based Aid
OP	Operational Policy
PAP	Project Affected People
PDO	Project Development Objective
PDUT	District Land Use Plan
RAP	Resettlement Action Plan
ROW	Roads Right-of-Way
RPF	Resettlement Policy Framework
SDPI	District Services of Planning and Infrastructure
WASIS	Water Services and Institutional Support Project
WB	World Bank

TABLE OF CONTENTS

EXECUTIVE SUMMARY	II
LIST OF ACRONYMS	XI
1 INTRODUCTION	I
1.1 CONTEXT.....	I
1.2 BACKGROUND OF THE WATER SERVICES AND INSTITUTIONAL SUPPORT PROJECT (WASIS II ADDITIONAL FINANCING).....	II
2 PROJECT DESCRIPTION	I
2.1 SUMMARY	I
2.2 PROJECT LOCATION.....	I
2.3 PROJECT DEVELOPMENT OBJECTIVES	I
2.4 PROJECT COMPONENTS	II
2.4.1 <i>Component A: Investment in Water Supply Production System</i>	ii
2.4.2 <i>Component B: Investment in Water Supply Distribution System</i>	ii
2.4.3 <i>Component C: Technical Assistance to FIPAG</i>	ii
2.4.4 <i>Component D: OBA for FIPAG cities including Maputo</i>	iii
2.4.5 <i>Component E: CRA</i>	iii
2.5 PROPOSED CHANGES UNDER WASIS II AF	III
2.5.1 <i>Under Subcomponent 1a:</i>	iii
2.5.2 <i>Under Subcomponent 1b:</i>	iii
2.6 ANTICIPATED SUB-PROJECT TYPES UNDER THE PROJECT.....	IV
3 OBJECTIVES OF THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)	V
4 DEVELOPMENT CONTEXT IN MOZAMBIQUE AND IN THE PROJECT AREAS	VII
4.1 MOZAMBIQUE’S CONTEXT	VII
4.2 BIOPHYSICAL CHARACTERISTICS OF MOZAMBIQUE	VII
4.3 CLIMATE CHANGE AND IMPLICATIONS.....	IX
4.4 THE URBAN CONTEXT OF MOZAMBIQUE	X
4.5 CONTEXT OF SPECIFIC PROJECT AREAS AND CURRENT WATER SUPPLY SITUATION.....	XI
4.5.1 <i>Beira and Dondo</i>	xi
4.5.2 <i>Chimoio, Manica and Gondola</i>	xii
4.5.3 <i>Tete and Moatize</i>	xiii
4.5.4 <i>Nacala-City</i>	xiv
4.5.5 <i>Pemba</i>	xv
5 OVERVIEW OF MOZAMBIQUE'S ENVIRONMENTAL POLICIES, LAWS, PROCEDURES, REGULATORY AND ADMINISTRATIVE FRAMEWORKS	XVII
5.1 SUMMARY	XVII
5.2 THE CONSTITUTION.....	XVII
5.3 ENVIRONMENTAL LEGISLATION.....	XVII
5.4 THE LAND LAW.....	XIX
5.5 LEGISLATION ON WATER AND WATER RIGHTS	XX

5.6	PUBLIC CONSULTATIONS PROCESS.....	XXI
5.7	LABOR LAW.....	XXI
5.8	CONTRACTING FOR PUBLIC CIVIL WORKS	XXII
5.9	RESETTLEMENT PROCESS.....	XXII
6	OVERVIEW OF THE WORLD BANK'S SAFEGUARD POLICIES.....	1
6.1	SUMMARY	1
6.2	SAFEGUARD POLICIES TRIGGERED BY THE PROJECT.....	1
6.2.1	<i>OP 4.01 Environmental Assessment</i>	2
6.2.2	<i>OP 4.09 Physical Cultural Resources (OP/BP 4.11)</i>	3
6.2.3	<i>OP 4.12 Involuntary Resettlement</i>	4
6.2.4	<i>OP 4.37 Safety of Dams</i>	5
6.2.5	<i>World Bank Policy on Disclosure of Information</i>	5
6.3	COMPLEMENTARY WORLD BANK INSTRUMENTS	6
6.3.1	<i>Code of Conduct and Gender based-violence</i>	6
6.3.2	<i>Temporary Project Induced Labor Influx</i>	7
6.3.3	<i>CERC Section of the Environmental and Social Management Framework for WASIS II –AF - Addendum</i>	9
7	GAPS IN MOZAMBICAN LEGISLATION AND IN THE WORLD BANK SAFEGUARD POLICIES	16
8	POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES	21
8.1	NEGATIVE IMPACTS	21
8.2	POSITIVE IMPACTS	24
8.3	SUMMARY OF ENVIRONMENTAL AND SOCIAL IMPACTS AND RESPECTIVE MITIGATION MEASURES	24
9	ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR ACTIVITIES UNDER WASIS II	32
10	SCREENING PROCESS	33
10.1	SUMMARY	33
	STEP 1: SITE SCREENING	33
	STEP 2: ENVIRONMENTAL CATEGORIES OF THE ACTIVITIES	34
	STEP 3: CARRYING OUT ENVIRONMENTAL WORK	35
	STEP 4: REVIEW AND APPROVAL	35
	STEP 5: PUBLIC CONSULTATIONS AND DISCLOSURE.....	36
	STEP 6: ENVIRONMENTAL MONITORING AND FOLLOW UP	37
10.2	RESPONSIBILITIES FOR THE IMPLEMENTATION OF THE SCREENING PROCESS	37
11	ASSESSMENT OF THE INSTITUTIONAL CAPACITY OF FIPAG.....	39
11.1	CAPACITY TO IMPLEMENT AND MANAGE WASIS II SAFEGURDS	39
11.2	STAFFING AND TRAINING RECOMMENDATIONS	40
11.3	WORLD BANK SUPPORT	41
12	STAKEHOLDER ENGAGEMENT PROCEDURES	42
13	CHANCE FINDING PROCEDURES	44

14	FIPAG’S ENVIRONMENTAL AND SOCIAL MANAGEMENT – LESSONS LEARNED	45
14.1	IMPLEMENTATION OF WASIS II ESMF.....	45
15	GUIDELINES FOR ANNUAL REPORTING	47
	CONCLUSION AND RECOMMENDATIONS	49
16	BUDGET FOR THE IMPLEMENTATION OF THE ESMF	50
17	SERRA , C. (2012). DA PROBLEMATICA AMBIENTAL A MUDANCAS: RUMO A UM MUNDO MELHOR. MAPUTO: ESCOLAR EDITORA.APPENDIX 1 - PUBLIC CONSULTATION MEETINGS MINUTES (2015).	52
17.1	TETE CITY	53
17.2	CHIMOIO CITY	57
17.3	MOATIZE CITY	61
17.4	BEIRA CITY	67
17.5	NACALA CITY	74
17.6	PEMBA CITY	78
18	APPENDIX 2 - PUBLIC CONSULTATION MEETINGS MINUTES (2018)	91
	INVESTMENT FUND AND WATER SUPPLY ASSET (FIPAG)	91
	ENVIRONMENTAL AND SOCIAL MAGEMENT FRAMEWORK (ESMF)	91
	MINUTES OF THE PUBLIC CONSULTATIONMEETING	91
	INTRODUCTION	91
	A TOTAL OF 134 PEOPLE ATTENDED THE PUBLIC CONSULTATION MEETINGS AS DISPLAYED IN THE TABLE BELOW:	
	91	
	DISTRICT: NACALA-A-VELHA	92
	SUMMARY OF QUESTIONS AND DISCUSSIONS	93
	CITY: NACALA CITY	99
	SUMMARY OF DISCUSSED ISSUES	99
19	APPENDIX 2: MITADER PRE-ASSESSMENT FORM (“FICHA DE PRE-AVALIAÇÃO”)	118
20	APPENDIX 3: PROPOSED ENVIRONMENTAL AND SOCIAL SCREENING FORM	120
21	APPENDIX 4: ENVIRONMENTAL AND SOCIAL CHECKLIST	123
22	APPENDIX 5: TERMS OF REFERENCE FOR THE PROPOSED ENVIRONMENTAL OFFICER FOR FIPAG	124
23	APPENDIX 6: GRIEVANCE REDRESS MECHANISMS	127
23.1	GRIEVANCE MECHANISMS.....	127
23.1.1	<i>Administrative and Legal Procedures</i>	129
23.1.2	<i>Steps for Grievance Redress Mechanisms</i>	130
24	APPENDIX 7: GENERIC TOR FOR AN ESIA	132

LIST OF TABLES

Table 1: Safeguard Policies triggered by the Project.....	2
Table 2: Positive list of goods, services and works that can be funded under CERC (Reference: CERC ESMF LAO)	10
Table 3: below summarizes potential impacts of the proposed activities/subprojects	12
Table 4: Prohibited Activities for CERC	13
Table 5: main differences and similarities between Mozambican legislation and the World Bank's Safeguards Policies	18
Table 6: CRITERIA FOR ENVIRONMENTAL CATEGORIZATION OF THE PROPOSED ACTIVITIES.....	34
Table 7: Responsibilities for Implementation of the proposed screening Process	37
Table 9: ESTIMATED BUDGET FOR THE IMPLEMENTATION OF THE ESMF.....	50

1 INTRODUCTION

1.1 Context

The Government of Mozambique (GoM) is implementing reforms in the urban water supply sector aimed at improving the coverage, quality and efficiency of services. The reform program has involved the reorganization of sector governance mechanisms, which have facilitated a transition towards decentralized water supply operations and management, including service regulation, investment planning, and private sector participation in operations. The GoM is in the process of preparing a proposal for the second phase of the Water Services and Institutional Support (WASIS) Project.

More specifically, the GoM has taken steps to provide for: i) reduced operating costs and increased efficiency, particularly through involving the private sector in water supply services in 21 major cities (i.e. Maputo, Matola, Boane, Beira, Quelimane, Nampula, Pemba, Dondo, Chokwe, Xai-Xai, Inhambane, Maxixe, Tete, Moatize, Chimoio, Manica, Gondola, Lichinga, Cuamba, Angoche and Nacala); ii) tariff adjustments that support financial sustainability; and iii) the establishment of a Regulatory Board for the sector, which considers both service quality and financial performance. The program for urban water supply also includes investments in rehabilitation and extension of systems.

The GoM's implementation agency for the new urban water program is the Fundo de *Investimento e Património do Abastecimento de Água* – FIPAG (Investment Fund and Water Supply Asset Holder). FIPAG is the managing entity of the urban water supply system as a Delegated Management Board and is responsible for 21 urban water supply systems, which supplies clean water to Maputo City, the capital city of the country. The other urban areas of Mozambique are expanding at a faster rate with the incorporation of the districts around the city centres into the cities. The extension of the water services to these neighbouring areas will place substantial demand on the capacity of the existing water services. The Greater Maputo Water Supply Project (GMWSP), funded by the World Bank, is addressing the infrastructure development needs of the greater Maputo and Matola areas. In addition, FIPAG has been benefiting from support from the World Bank under the Water Services and Institutional Support (WASIS) and WASIS Amendment Projects, which were aimed at improving the performance, sustainability and coverage of water supply services in Beira, Dondo, Quelimane, Nampula, Pemba, Chimoio, Gondola, Nacala, Angoche, Tete and Moatize cities. This enabled poor families to also benefit from clean water supply services.

Undesirable environmental and social impacts are likely to arise from the proposed activities, albeit minor, and such impacts are expected to be construction and operation-related, however, manageable with specific mitigation measures. It is expected that the exploration of underground water resources during the operational phase of the development will definitely result in impacts on underground water resources. It is possible that the region may experience a reduction in the level of underground water resources during specific periods of the year. To comply with World Bank OP/BP 4.01 on Environmental Assessment as well as to protect people and the biophysical and social environment from the negative impacts and minimize the potential damage of such impacts on the natural and social environment, an Environmental and Social Management

Framework (ESMF) was prepared, which outlines the institutional arrangements, and related environmental and social training needs to guide the planning and implementation of specific projects, as well as stipulating mitigation measures to be observed throughout the lifecycle of the projects.

1.2 Background of the Water Services and Institutional Support Project (WASIS II Additional Financing)

In 2015 the Investment Fund and Water Supply Asset Holder (FIPAG) prepared the second phase of the Water Services and Institutional Support Project (WASIS II) to be financed through a credit facility from the International Development Association (IDA) over a period of approximately 6 years. The WASIS II project was a follow-up from the WASIS I project closed on October 31, 2015. The objective of WASIS II Project was to improve the performance, sustainability and coverage of water supply and related services in the major cities in Mozambique, namely Beira, Dondo, Chimoio, Manica, Gondola, Tete, Moatize, Pemba and Nacala. The project was to benefit approximately 105,000 households (556,500 people) in the project Cities who will be directly connected to the formal water supply system and have access to treated, piped water.

The project was presented to the Board with a financing gap, with a total amount of US\$ 146 million for water infrastructure investments and institutional strengthening support for five target cities of Pemba, Beira, Dondo, Tete and Moatize. However, due to the financing limitations, only US\$ 90 million was allocated from IDA 17. The remaining US\$ 56 million represented the financing gap for undertaking the planned investments for network expansions in Tete and Moatize. The government of Mozambique (GoM) then agreed that investments in Tete and Moatize would not commence until this financing gap was filled, and that the project would be restructured to realign the activities if the financing gap did not materialize under IDA 18.

The parent project (WASIS II) included investments that aim at increasing water production and distribution in Tete and Moatize. The combined population of the two cities is approximately 263,000 and are experiencing rapid economic growth due to extended development in the mining industry. Water supply in Tete and Moatize is served by three water systems operated by FIPAG. Service coverage is around 80 percent of the population, supplying an average of 19 hours per day. The rapidly growing demands for new household and industrial and commercial connections in Tete and Moatize have placed tremendous pressure on the existing water production and distribution systems with potential adverse impacts on service standards. Groundwater studies have confirmed that the water source is sufficient to meet existing needs and projected demands, but points to the additional investment requirements for expanding production and treatment facilities and distribution system. It is also critical to secure water supply to Moatize where the source has reached its capacity. These investments, combined with new distribution centers and network rehabilitation and expansions, will enable FIPAG to improve coverage of household connections, provide reliable supply of water to industrial and commercial customers, and improve service standards.

Water supply Rehabilitation and Expansion to Nacala: Nacala is one of the fastest growing cities in Mozambique. Recent industrial developments in Nacala port have triggered significant urban influx and economic activities, putting additional pressure on the strained water supply system. Nacala's main water supply is consisted of a water treatment plant and transmission main

from the Nacala Dam. It is at an advanced stage of degradation, with high losses between the existing intake and transmission systems and frequent breakdown in the transmission system from aging and dilapidated pipes. Urgent rehabilitation, therefore, is required in both the treatment plant and the transmission main to improve efficient and quality water supply to Nacala.

The AF will include:

- a new water treatment plant with a capacity of 25,000 m³/day, increasing the overall production capacity in Nacala by 17,800 m³/day;
- a new transmission line to convey the water into the city; and
- rehabilitation and expansion of critical portions of the existing distribution network. These investments will increase the storage capacity of the city's water supply system from 9,150 to 17,400 m³ and improve reliability and quality of services. Since most of the poor live in peri-urban areas in Nacala that are particularly affected by the water shortage, this increased in water supply will enhance their participation, particularly women, in local economic activities. Overall, an additional 80,000 people are expected to benefit from the improved water supply in Nacala.

Co-financing Nacala investments with the Government of the Netherlands. The AF will cover 50 percent of the cost of project investments with the other 50 percent to be financed by the Government of Netherlands under the DRIVE Program. The Government of the Netherlands has approved earmarking of funds for this co-financing in December 2018, thus successfully meeting the funding requirement for the Nacala investments. The agreement between FIPAG and the government of Netherlands on this financing was signed and deemed complete.

The current document is an update of the ESMF for the parent project (WASIS II), informed by the scope of activities under WASIS II Additional Financing (AF) to include Nacala. The WASIS II AF is prepared based on extensive literature reviews of existing documents, information gathered at proposed project area (Nacala); review of lessons learned from the implementation of the Parent Project WASIS II, Greater Maputo Water Supply Project (GMWSP); synthesis of relevant provisions from the Mozambican legal framework related to the ESMF and World Bank Safeguard Policies and guideline documents; and feedback obtained from public consultation meeting carried in Nacala.

The potential environmental and social impacts associated with the Project have been highlighted, and mitigation measures to offset the potential negative impacts have been recommended. Recommendations have also been made with regards to the need to improve FIPAG's institutional capacity to continue improving its performance in integrating environmental and social considerations in the various water supply projects (planning, construction, operation).

Study Framework

This document is the Environmental and Social Management Framework (ESMF) for WASIS II Additional Financing, covering the proposed construction of the new water treatment plan, a new water transmission line from the water treatment plant to the city of Nacala, and rehabilitation and expansion of critical portions of the existing distribution network in Nacala. The environmental

evaluation and reporting on this document has been carried out taking into consideration the scope of the proposed works under parent project (WASIS II).

Under WASIS II Additional Financing, the nature and scope of the investments related to increased water production and distribution under sub-component 1a and 1b for Tete and Moatize remain unchanged. Specifically, the investments will focus on: 1) increasing water production of the systems in these cities through expansion and refurbishment of the wellfields, existing intake, water treatment facilities, transmission mains and pump stations; and 2) increase service coverage in the distribution system in Tete and Moatize through construction of new distribution centers and rehabilitate existing ones to increase water storage through groundwater reservoir, expansion of water supply networks, installation of district meters and control valves, and installation of approximately 60,000 new household meters and related materials for domestic connections. These activities were informed by technical diagnostics and studies and concept designs were completed for key infrastructure elements. These proposed investments had already been appraised and included in the parent project.

The Government of the Netherlands will co-finance 50 percent of the costs of the project activities, thus, scaling up to include new investment in Nacala, under WASIS II AF. Specifically, this component will be modified to include:

iii. Subcomponent 1a:

- b. Electromechanical equipment for the existing raw water intake that was built at the time the Nacala Dam was rehabilitated, along with 2 km of raw water transmission main from the intake to the water treatment plant.
- c. Construction of a water treatment plant with 25,000 m³/day treatment capacity, including the associated electromechanical equipment, pumping stations and a 400 m³ reservoir.
- d. Construction of a 33 km transmission main with associated booster stations, rehabilitation of existing reservoirs, as well as replacement of 10 km of the existing transmission main.

iv. Subcomponent 1b:

- e. Construction of a new distribution center and expanding the distribution network by 150 km.

The specific nature of the works envisaged in the parent WASIS II program will vary from city to city and will depend on the type and the prevailing physical conditions on existing sites. It should be noted that all specific investments under the WASIS II Additional Financing will require the preparation of Environmental and Social Impact Assessment (ESIA) and respective Environmental and Social Management Plan (ESMP), taking into consideration the national Environmental Regulations as well as the World Banks' and other relevant environmental and social safeguards and best practices. Once the Construction Contracts have been awarded, the Contractors will be required to use the projects' ESIA's and ESMP's to prepare their own ESMP or Contractors' Environmental and Social Management Plans (C-ESMP), clearly indicating how projects' impacts will be addressed and the needed resources to ensure environmental compliance throughout the project.

The parent WASIS II project involves five components of which four are implemented by FIPAG. Activities under these components include: **a) investment in water supply production system**, with a focus on the provision of goods and civil works in the project cities such as the rehabilitation and construction of new wells, rehabilitation, expansion and construction of new water treatment plants for iron removal, amongst other works; **b) investment in water supply distribution systems**, which will include works such as increasing storage capacity, rehabilitating and construction of distribution centers, and installation of additional new water networks; **c) the provision of technical assistance to FIPAG**, with the aim of strengthening its capacity to design and supervise the project works, as well as implement the Environmental and Social Management Plans (ESMPs) and Resettlement Action Plans (RAPs) and dam safety studies as needed, and to undertake hydrological and geophysical studies to identify new water sources, amongst others; **d) Output-Based Aid (OBA) for FIPAG cities including Maputo**, which will be managed and implemented by the Regulatory Water Council 2 (CRA).

²*Conselho de Regulação de Águas* in Portuguese.

2 PROJECT DESCRIPTION

2.1 Summary

The Water Services and Institutional Support Project (WASIS II-Additional Financing) is currently part of the Government of Mozambique's (GoM) implementation of reforms in the urban water supply sector aimed at improving the coverage, quality and efficiency of services in Mozambique. The proposed project will contribute to the provision of safe drinking water and sanitation as part of the MDG and lead to an increase in the quantity of water available, thus addressing water demand in the project cities. The additional water supplied to the cities will target the currently unserved and underserved areas, which are mostly low-income, peri-urban areas. The project will serve to attract the private sector by creating favourable conditions in the water supply business, with long-term prospects for profit generation. The project is expected to directly benefit approximately 105,000 households (556,500 people) in the targeted sites, with benefits accruing directly to the populations living in the project areas. This section provides a brief overview of the Project taking into account the prevalent water supply challenges and needs in the many cities in Mozambique.

The project proponent is the Investment Fund and Water Supply Asset Holder (FIPAG), who will be responsible for the preparation, implementation and monitoring of the Project. FIPAG will also be responsible for ensuring that the recommendations from the current document are taken into account during all phases of the WASIS II-Additional Financing.

2.2 Project Location

The project will be implemented in Beira, Dondo, Chimoio, Manica, Gondola, Tete, Moatize, Nacala-City and Pemba.

2.3 Project Development Objectives

The development objectives (PDO) of the second phase of Water Services and Institutional Support Project (WASIS II) are the following to:

- (i) increase safe, cost-effective water supply from groundwater or surface water sources to the applicable Cities of Beira, Dondo, Chimoio, Manica, Gondola, Tete, Moatize, Nampula, Nacala-City and Pemba, with due consideration of the impacts of seasonal fluctuations and resilience to climate change;
- (ii) increase the network and coverage of the service through metered connections for residents in the poor peri-urban parts of the project Cities,
- (iii) reduce the percentage of unaccounted for water and water losses by replacing old leaking transmission mains and networks;
- (iv) improve water supply management and water loss management in order to make more water available to the residents by installing district water meters;
- (v) strengthen the institutional and regulatory framework of the Regional Water Supply Utilities in the country;
- (vi) make the water supply systems more cost-effective and sustainable by improving cost recovery measures, and to

- (vii) strengthen the Regional Water Utilities in the Central and Northern regions under FIPAG by providing training and support to improve effectiveness in order to create private sector involvement/interest in the operation of these water schemes.

All the development objectives above do contribute directly towards the achievement of Higher-Level Objectives, including reducing poverty and inequalities. The project is expected to directly benefit approximately 105,000 households (556,500 people) who will be directly connected to the formal water supply system in the beneficiary Cities. The residents will benefit by receiving treated and piped water.

2.4 Project Components

The project comprises five components, for a total cost of US\$164 million. Four of the components (A, B, C and D) will be implemented by FIPAG, while the fifth will be implemented by CRA, and are summarized as follows:

2.4.1 Component A: Investment in Water Supply Production System

This component includes goods and civil works in the project Cities to: (i) rehabilitate and construct new wells including electrical and hydraulic equipment, (ii) rehabilitate and expand existing and construct new water treatment plants for iron removal (iii) adding or replacing leaking Transmission Mains from the water source to the cities, and (iv) ancillary works, including telemetry systems to improve management of the systems. The footprint of this component will be minimal as all proposed civil works would be carried out on existing FIPAG property or within road rights-of-way (ROW).

2.4.2 Component B: Investment in Water Supply Distribution System

This component includes goods and civil works to (i) add additional storage capacity of 11,850m³, (ii) rehabilitate or construct additional Distribution Centers, (iii) install approximately 168 District water meters to monitor unaccounted for water, (iv) install approximately 390km of additional new water networks, (v) replace approximately 187 km of old leaking network pipelines and transfer existing connections, and (vi) install approximately 105,000 new connections and associated meters and fittings in the project Cities. In addition, the components will add goods, meters and equipment. The environmental and social impacts of this component will be minimal as all proposed civil works are expected to be carried out on existing FIPAG property or within pre-defined road rights-of-way (ROW).

2.4.3 Component C: Technical Assistance to FIPAG

This component will serve to provide technical assistance to FIPAG, including: (i) design and supervision of project works as well as implementation of Environmental Management Plans (EMPs) & Resettlement Action Plans (RAPs), as well as dam safety studies as needed; (ii) hydrological and geophysical studies to identify new water sources; (iii) consulting services to

support the preparation of a follow-on project to cover FIPAG cities, including master plans; (iv) consulting services to FIPAG to support project implementation, including support for the creation of the Water Regional Utilities; (v) financial and technical audits; and (vi) capacity building and training.

2.4.4 Component D: OBA for FIPAG cities including Maputo

This component will subsidize connections to low-income people in cities under the responsibility of FIPAG, including Maputo.

2.4.5 Component E: CRA

2.5 Proposed changes under WASIS II AF

The proposed changes include expanding the scope of the project to include the water supply treatment transmission and distribution systems for Nacala City. More specifically, the project will finance:

2.5.1 Under Subcomponent 1a:

- Electromechanical equipment for the existing raw water intake that was built at the time the Nacala Dam was rehabilitated, along with 2 km of raw water transmission main from the intake to the Water Treatment Plant (WTP).
- Construction of a WTP with 25,000 m³/day treatment capacity, including the associated electromechanical equipment, pumping stations and a 400 m³ reservoir.
- Construction of a 33 km transmission main with associated booster stations, rehabilitation of existing reservoirs, as well as replacement of 10 km of the existing transmission main.

2.5.2 Under Subcomponent 1b:

- Construction of a new Distribution Centre (DC) and expanding the distribution network by 150 km.

The project implementation arrangements will remain unchanged. Components 1, 2, 3 and 4 of the WASIS II project will be implemented by FIPAG, the asset-holding agency responsible for investments in urban water supply in the largest cities in the country. Component 5 will be implemented by CRA, the water regulator. The Project's environmental classification remains as a Category B. The key production and water distribution infrastructure in Nacala City include the following:

- Electromechanical equipment of the intake and 2 km DN 750 mm of raw water transmission main from the intake to the Water Treatment Plant;

- Construction of a new Water Treatment Plant with 25,000 m³/d capacity including pumping station EB1, 400 m³ clear water reservoir and associated electrical and mechanical equipment and fittings;
- Rehabilitation of existing reservoir R0;
- Construction of 21 km of clear water transmission main DN 500 mm from the WTP to R8 DC;
- Replacement of 10 km of the existing transmission main;
- Construction of a new booster pumping station EB2 located between the WTP and new DC;
- Construction of a new DC composed of two ground reservoirs with 4,000 m³/d each, 250 m³ elevated tower and pumping station EB3;
- Construction of 12 km of main distribution lines;
- Construction of 150 km distribution network.

This ESMF for WASIS II – AF includes a description of environmental baseline conditions of Nacala City, identification of potential environmental and social impacts, and recommendation of generic mitigation measures, processes and responsibilities for screening and final impact evaluation for each project and ancillary facility and preparation of respective ESMPs.

2.6 Anticipated sub-project types under the Project

It is however anticipated that WASIS II – AF will be related to the proposed activities under each of the above-mentioned components. These include:

- Rehabilitation and construction of new wells including electrical and hydraulic equipment;
- Rehabilitation and expansion of existing water treatment plants, and construction of new ones for iron removal;
- Adding or replacing leaking Transmission Mains from the water source to the cities;
- Rehabilitation or construction of additional Distribution Centres;
- Installation of District water meters to monitor unaccounted for water;
- Installation of a new distributions network including the installation of district meters; and
- Replacement of old leaking network pipelines and transfer of existing connections to the new lines.

3 OBJECTIVES OF THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

The objective of an Environmental and Social Management Framework (ESMF) is to identify potential negative environmental and social impacts of the proposed WASIS II activities and enhance positive ones, and to recommend suitable mitigation measures to eliminate or reduce the negative impacts, and to make recommendations to the project proponent that should be taken into account throughout all phases of the proposed Project. The objective of this report is therefore to provide an environmental and social screening process for future investments in the rehabilitation of existing infrastructure or construction of new ones. However, detailed project designs have not yet been finalized. Once such designs have been concluded, an ESMP will be prepared, which will include appropriate mitigation and management measures.

The screening process must be consistent with the World Bank Safeguard Policy OP/BP 4.01 Environmental Assessment. This policy requires that all Bank-financed operations are screened for potential environmental and social impacts, and that the required environmental and social work be carried out on the basis of the screening results. Thus, the screening results may indicate that:

- No additional environmental and social work would be required;
- The application of simple mitigation measures by qualified staff from FIPAG at all levels (as well as Contractors) would be sufficient;
- A separate Environmental and Social Impact assessment (ESIA) would be required;
- An appropriate Environmental and Social Management Plan (ESMP) ought to be in place.

Considering the expected investments in the rehabilitation of existing and construction of new infrastructure under the WASIS II- Additional Financing, significant localized impacts may occur, thus requiring appropriate mitigation measures. Potential environmental impacts are addressed in the context of this ESMF, while potential social impacts as a result of land acquisition such as loss of livelihoods or loss of access to economic assets are addressed in the context of the Resettlement Policy Framework (RPF).

The Environment and Social Management Framework (ESMF) of this project has been prepared to:

- integrate environmental and social aspects into the pre-feasibility and feasibility analysis of potential future sub-projects at the preparation and planning stages;
- promote transparency through the use of extensive stakeholder consultations and disclosure procedures;
- take into account possible uses of innovative and strategic environmental and social analyses;
- encourage consideration of technical alternatives based on possible environmental and social impacts; and to
- strengthen environmental and social management capacities within FIPAG.

During the preparation phase of the WASIS II Project proposal, this ESMF will assist project management in identifying and mitigating the potential negative environmental and social impacts

of potential future sub-projects. There is a need for the ESMF to be prepared for the civil works as it will subsequently result in the development of the ESMPs. The ESMF aims to ensure that the civil works of the project do not create or result in serious adverse impacts on the local community and local environment; that a mitigation plan is carried out effectively; and that possible complaints from the local government authorities and community are addressed and minimized. The ESMF therefore describes the steps and actions to be carried out by project proponent throughout all stages of the project.

Among other proposed activities, this ESMF proposes to strengthen the capacity of existing FIPAG staff and other relevant key stakeholders with an aim to deliver the required environmental and social support during the project implementation.

4 DEVELOPMENT CONTEXT IN MOZAMBIQUE AND IN THE PROJECT AREAS

4.1 Mozambique's Context

The land area of Mozambique covers a vast territory of 799,380 km² of which 2% comprises inland water bodies, 13% national parks, and 21% comprises forest cover. The country is located in sub-Saharan Africa east of the Continent, bordering Tanzania in the North, Malawi, Zambia and Zimbabwe in the West, South Africa and Swaziland in the South and the Indian Ocean in the Eastern part, which encompasses a 2,470 km coastline and an exclusive economic zone of 200 nautical miles. This geographic positioning of the country's ports has resulted, from the colonial period, in the development of three important corridors in the east-west direction and vice versa, meant precisely to serve neighbouring countries. These are the corridors of Maputo, Beira and Nacala, which have railway lines as one of their main components. Other components of the corridors are highways, power transmission lines and communications. Mozambique has a population of approximately 24 million inhabitants, of which 40% of the highest population density occurs in the interior (east-west direction). The country contains rich and diverse coastal and marine environs. Mozambique is also endowed with natural resources such as coal and natural gas.

In the last decade Mozambique has been considered one of the fastest growing economies in Sub-Saharan Africa, with a GDP growth rate at an average of 7% annually. Coal, gas and other mineral reserves have been discovered in the past few years and this resource boom is one of the major contributors to the national economic growth. There is no doubt that the natural resources sector has the potential of radically change the social and economic structures of Mozambique, but at the same time, these can also bring forth challenges for the country to achieve growth in an inclusive manner.

While on the one hand the country is experiencing an increase in domestic and foreign investments, on the other hand over half of the population (54%) lives below the poverty line on less than US\$1.25 a day. As mentioned above, the main challenge is ensuring that all Mozambicans benefit from the economic growth equitably. Improving the living conditions of citizens and providing access to basic services such as education, health care, water and sanitation remains priorities for the government of Mozambicans as clearly reflected in the government's policies and plans.

4.2 Biophysical Characteristics of Mozambique

Precambrian rocks underlie approximately half of Mozambique, mainly in the north and northwest parts of the country, with Karoo sediments occurring in small areas in the north and north-western parts. Mozambique is composed of variable soil types. Within the immature soils, the alluvial soils are characterized by having the greatest agricultural potential, and cover most of the Zambezi delta and along the banks of various rivers. The areas covered by alluvial soils include significant layers of hydromorphic and halomorphoc soils. There are also immature soils which include the well-drained soils in the proximities of the coasts of Cabo Delgado, Nampula, Zambezia, Sofala and Maputo and in the interior of Gaza and Inhambane Provinces. Rovuma River to Ponta do Ouro, interspersed in places with alluvial and other soils from the depressions. These are usually soils of low fertility and characterized by poor water retention properties and poor texture.

On the other hand, lithoidal soils cover most of the Tete, Sofala, Manica, Gaza, Zambezia and Maputo provinces. These soils which occur in the transition zones between humid and semi-arid zones are poorly developed soils, coarse-grained and stony, with gravel occurrences, stones, and outcrops on the surface. The northern and some parts of the central and western areas have red soils of varying texture. These soils are usually good for natural pasture; however, they are highly susceptible to vegetation degradation and erosion. The semi-arid or dry sub-humid climates in the southern provinces and Manica, Sofala and Tete provinces are covered by greyish-red soils resulting from volcanic rock.

The laterite soils found in the Central and Northern provinces are medium and fine textured well drained and deep soils and they are the most widely represented and associated with the sub-humid sub-climates occurring in the series. Their color is depth dependent, with red being located near the surface and grey soils located lower down. The ferralitic soils are found in the humid climate and the upland in the rainy regions of Niassa, Manica and Zambezia provinces. They are well-drained, clayey and deep soils and are known for their fertility and great agricultural potential.

The distribution of land use in the country is highly influenced by climatic conditions. There is a general tendency for an increase in annual rainfall pattern from the coast to inland with major variation according to altitude. The average rainfall ranges from 350 mm at Pafuri (in Gaza) to 2348 mm in Tacuane (in upper Zambezia). The south of the country is a drought-prone area. Most of the coastline receives 750 to 1000 mm of annual rainfall and the semi-arid interior of Zambezi Valley in Tete province receives less than 600 mm average annual rainfall. In the central region of Mozambique, there are a number of humid pockets associated with Mt. Binga (Manica province), Mt. Gorongosa (Sofala province) and Mt. Namuli (Zambezia province), which receive more than 2,000 mm per year. The rainy season is between November and March and the dry season occurs between April and October. The country is vulnerable to natural disasters namely; floods, drought, and cyclones which tend to have negative impacts on livelihoods.

With regards to Mozambique's hydrology, the country includes thirty-nine major rivers which drain into the Indian Ocean. The seasonal nature of the rainfall regime, with a dry season up to five months long, and periodic and unpredictable droughts is a major limitation to water usage. The major perennial rivers of Zambezia province are the Licungo (Lugela), Raraga, M'lela, Molocue, Ligonha and Meluli. The most important River in Mozambique is the Zambezi, which enters Mozambique at Zumbo where it immediately swells to form the Cahora Bassa Lake.

Mozambique is a country with a high biodiversity comprising 5,500 plant species, 222 mammals, 580 birds, 167 reptiles, and 39 amphibians recorded to date. Certain areas have been designated as world heritage sites due to their unique biodiversity. About 25% of the land has commercial forestry potential, 12.5% constitutes state-protected areas and a further 22% comprises potential wildlife habitat. The country's 2,470 km of coastline is unique in the East African Marine Region in terms of the quality, diversity and species.

Generally, the country's environment constitutes a significant public asset and is the basis upon which much of its recent macro-economic development and poverty reduction has been achieved. All the principal sectors of the Mozambican economy (i.e. agriculture, mining, tourism, forestry, fisheries and wildlife) are based on natural resources. Mozambique's rich ecosystems, biodiversity

and natural resources hold a significant exportable value and commercial potential. Despite the country's richness in terms of natural resources, the combination of a civil war with natural hazards has forced population migration to urban areas and coastal zones resulting in negative environmental effects, such as accelerated desertification, pollution of surface and coastal water environs. Furthermore, poor farming and mining practices as well as the unsustainable use of natural resources for energy have exacerbated deforestation, soil degradation and pollution of surface and groundwater in most areas of the country.

4.3 Climate Change and Implications

With the increase in the intensity and frequency of global natural hazards, mainstreaming sustainability and climate change have become important priorities on the global scale as far as environmental management is concerned. There is consensus that the increase in these factors is being exacerbated by human activity. There is also the general consensus that these disasters tend to impact adversely on vulnerable people in poor countries especially in the tropical and sub-tropical regions of Sub-Saharan Africa, and that these may hinder development and poverty reduction efforts.

Mozambique is highly susceptible to various disasters due to its geographic location, its climate conditions, as well as the lack of resources in the country to build enough resilience. The natural disasters the country is exposed to are floods, droughts, cyclones and epidemics. The Central provinces are more prone to floods, tropical cyclones and epidemics, followed by the Southern and Northern provinces. The South with its tropical dry Savannah climate is more prone to droughts than the other regions. And the North is dominated by a tropical rainy climate and a moderately humid climate modified by altitude.

According to the INGC, the climate will be more extreme with drought spells being hotter and longer and rains being more unpredictable, increasing risks of crop failure and droughts, floods and uncontrolled fires. The Central zone is likely to be the hardest hit in terms of climate change, particularly those regions at lower altitude, which are already experiencing hot temperatures.

Debates on the possible negative impacts of climate change bring about opportunities for the promotion of sustainable development practices by adopting suitable mitigation and adaptation measures to deal with changes in climate. Of particular relevance to this ESMF is the phenomenon of flooding in urban areas as it is becoming increasingly severe and more frequent, affecting especially the poorest and vulnerable populations in urban areas. Climate change is altering rainfall patterns – with a tendency of increased frequency and intensity, and therefore increasing the potential for floods. Factors such as the ones already mentioned in previous sections – urban growth; occupation of floodplains, poor waste management and the low coverage in construction and maintenance of drainage systems – are aggravating the flooding problem. In Mozambique, the country's geographical location as well as developing socio-economic conditions place most of the urban population at risks of floods. With regards to the proposed Additional Financing, intensive rainfall may lead to soil erosion and expose the water transmission mains. This issue need to be taken into account during the detailed design and construction of the project.

In areas where drought is the main concern and where there are cyclical shortages of water, the project equally offers the potential for the local population to have access to clean/ safe water

during dry and drought seasons, and will reduce the amount of time that people would have used to fetch water, particularly women and children.

The proposed WASIS II Project offers an opportunity for improving the living conditions of the urban populations, in terms of providing access to water systems, and also in terms of raising awareness on climate change and the risks it poses on the lives and health of the population in the proposed project areas.

4.4 The Urban Context of Mozambique

In 2005, Mozambique was one of the least urbanized countries in Southern Africa. It is projected to be the fourth most urbanized country in the region by 2025 after Botswana, South Africa and Angola. Of the total population of the country, it is estimated that approximately 36% live in 43 of the urban municipalities. The population growth in 7 of 43 urban municipalities is at 10% annually.

Urbanization and the rapid growth in urban populations is a result of massive migration of people from rural areas in search of better living conditions. This has resulted in a drastic increase in the establishment of disorganized informal settlements within cities. Most of the cities are characterized by secondary cities in the form of unregulated informal settlements, with most of the urban populations (three quarters) living in suburban neighborhoods (bairros) with limited services such as drainage and sewage systems, waste management and collection and a road network in good conditions, and particularly with poorly organized or constructed houses.

Many of the cities of Mozambique are characterised by the spread of slums given the inability of the majority of people to find better housing conditions. These slums are generally poorly organized, with little or very poor sanitation and hygienic conditions. Basic services such as waste collection lack in most of these informal settlements and many of these slums experience a chronic shortage of water supply facilities making them prone to health issues such as acute and chronic diarrhea. As a result, all the cities in Mozambique experience major challenges associated not only with disorderly settlements but also related to access to water and adequate sanitation. This leads to incidents of pollution, destruction of green spaces, environmental degradation, and waste management related problems, among others.

Notwithstanding the abovementioned challenges faced by the urban population in Mozambique, it is estimated that 80% of the referred population has access to healthcare, provided at four levels: health clinics, district hospitals, provincial hospitals and central hospitals in the case of Maputo, Beira and Nampula.

With regards to the economic side, the main issues of concern in urban areas are that income inequality and social exclusion are higher than in rural areas. The Mozambican urban population is reportedly worse off in comparison to their rural counterparts. Most of the poor in Mozambican cities do not have enough income to make their living through the formal market.

As is the trend in others areas in the world, about two thirds of Mozambique's population growth between now and 2050 is expected to be in urban areas. Access to improved water and sanitation services is already a challenge, and in the coming decades these are anticipated to increase exponentially unless measures are taken to address issues related to the demographics of

Mozambique's urban areas. Although Mozambique's economic growth is strong, more needs to be done to ensure that cities have the capacity to accommodate the population growth in urban areas and to respond to the demands and needs of its inhabitants.

4.5 Context of Specific Project Areas and Current Water Supply Situation

4.5.1 Beira and Dondo

The City of Beira is the capital of the Sofala Province, located in central region of Mozambique and it is the second largest capital city in the country. Beira City is located below the sea level and as a result has serious issues related to erosion. During the rainy season the city's main issues become visible, and these are mainly related to drainage and its impact on the lives and health the population of the city.

Like most African and Mozambican cities, Beira is characterized by old colonial buildings built in the 19th century as well as an increase in the number of modern buildings and new residential areas. Having said this, one of the main challenges faced by the city is the emergence of suburban neighborhoods (bairros), which are usually disorganized and require formalization. Increasingly, the population of Beira continues to grow. According to the most recent data (INE 2006), the City of Beira has a population of over 550 000 people. The city comprises 26 neighborhoods (bairros) and 5 Administration Posts. In terms of the provision of health services, Beira has 16 health units. With regards to water, 74% of the city's population has been reported as having access to water.

Trade and commerce and economic growth continue to increase in Beira, while informal trade is also increasing exponentially. The Port, the Development Corridor and the Sena Railway Line, as well as the city's geographical location make Beira economically attractive given its strategic position in linking the central and northern regions of the country. This strategic location is equally of importance to Mozambique's landlocked neighbouring countries, which make use of both the Beira Corridor and the Port for communication and transportation of goods and services to and through the country.

As part of the consultation process undertaken in Beira for purposes of the elaboration of this report, the following issues of concern were raised that need to be taken into consideration during the development of the sub-projects:

- There are a number of expansion areas in Beira city characterized by disorderly settlements, which do not follow suitable urban planning principles. These expansion areas make the installation of suitable water distribution systems challenging.
- The existing water distribution networks in peri-urban areas of Beira are malfunctioning and require to be fixed. Of particular concern are old asbestos pipelines, which need to be removed and replaced with new lines.
- It is crucial that the WASIS II project be implemented in stages, beginning with rehabilitation activities and subsequently the construction of new network systems.

Dondo (district and city) on the other hand is located in the central-east of Sofala Province, within the Beira Corridor and is only 30km away from Beira, which facilitates its access to the different districts of the Province and neighbouring countries, as well as facilitates the movement of goods.

The city has a surface area of 382 km², and it has 4 urban localities and 10 neighborhoods (bairros). According to the latest demographic data, Dondo has a population of 71,644 people. The age of population is very young, with 42% estimated to be under the age of 15.

Over a third of the population in Dondo has access to piped water. Only thirty per cent (30%) of households have access to sanitation drains and cesspit tanks, with most households making use of improved latrines. One of the main challenges of Dondo is related to retained stagnant water, which results in the proliferation of mosquitoes. It is expected that the city may also experience massive erosion in the near future, which may cause pressures on available land for the development of infrastructures and for agriculture activities.

In economic terms Dondo's geographical location along the Beira Corridor, offers the city access to a commercial network and markets. Dondo's economy is fundamentally based on the primary sector and informal commerce. The main economic activity is agriculture, particularly the production of rice, cassava and a variety of fruits and horticulture. In terms of industrial activities, Dondo is quite developed. Industries such as the production of cement and sawmills are examples. However, most of the local population is employed in the informal economy.

During the public consultation meeting in Beira the following issues of concern were raised in relation to Dondo:

- Dondo has access to a number of services including water and electricity supply even though these are in low-density areas, which could have resulted from the lack of coordination and communication between local structures. The involvement of the Municipality in all phases of the project is crucial to ensure the success of the project.

4.5.2 Chimoio, Manica and Gondola

Chimoio, Manica and Gondola are all located in the Manica province, west of central Mozambique. Chimoio is the capital city of the province and the fifth largest city in the country after Maputo. Manica Province is characterized by a tropical climate, with two distinct seasons: a rainy season from September to March and a dry season from April to August. Because of its altitude and relief, Manica in general has relatively high rainfall. The Province consists of three topographic areas, namely mountains, plateaus and plains. The mountains are located mainly in the far West, with generally higher altitudes of more than 1,000 m near the border with Zimbabwe. The soils in Manica Province are mainly brown and clayey soils and red clay-sandy soils. Manica is rich in water resources with the Zambezi River flowing in the far north, the Pungué and Buzi in the central region, and the Save River flowing in the south of the province. The estimated population size of Manica Province according to 2011 demographic statistics is estimated at 1,672,038. The population of the Province is predominantly rural, with only 25.3% of people who live in urban areas. The estimated population of the project target areas is 401,437 and it is estimated that 61% of the population has access to piped water.

In terms of health, the predominant issues amongst children are malaria, diarrhea, acute respiratory infections, conjunctivitis and malnutrition. In adults, malaria, tuberculosis, and STIs and AIDS are

the health issues of concern. With regards to urban poverty in Manica this is manifested in violence, juvenile delinquency and prostitution. In urban areas, the average access rate to drinking water in the province is 41%, and sanitation is characterized by the use of cesspit (septic) and improved latrines.

The key economic activities of the three cities are agriculture, focuses mainly on food and cash crops; commercial activities, which are dominated by the informal market, with entrepreneurs focused on consumables needed by individuals and households); fishing; and timber exploitation amongst others. Chimoio area is also the home of the major community producer of bananas, located in Gondola.

In Manica province, a public consultation was undertaken in Chimoio alone.

Some of the issues of concern identified during the consultation process included:

- In some areas pipes are superficial/ not installed at the required depth and leakages occur frequently in areas such as such as 7 de Setembro, and often increase the risk of diseases associated with stagnant water from such leakages;
- Paved roads being destroyed for the installation of water conducts and/ or water supply systems but not being restored after the works have been concluded.

4.5.3 Tete and Moatize

Tete and Moatize are located in the Province of Tete in the central region of Mozambique. In terms of climate, the average temperature is 27.1°C, the absolute maximum is 43.7°C and the absolute minimum is 12.1°C. The average precipitation monthly is 67 mm. Tete is one of the hottest parts of Mozambique as it lies on a plateau 500m above sea level. Tete and Moatize have a population of 267.179 and it is estimated that 79% have access of water.

Tete province has been well known for the hydropower dam Cahora Bassa. In the last few years, Tete province, with particular emphasis on Tete City and Moatize town, has become the center of attention as it possesses one of the largest and richest coal deposits in the world. Besides coal, the region has significant deposits of iron and rare metals. A number of mining projects have been developed in the last few years and the province has been denominated the ‘chicken with golden eggs’. The expectation from Mozambicans in general is that the mining industry will stimulate economic growth in the country, stimulate growth in other sectors such as agriculture and industry, and subsequently translate into equitable distribution across all social-strata of the country. This has not been the case, and at present the mining industry in Tete is experiencing major challenges and investments are reducing substantially.

In Moatize agriculture is the predominant activity and is developed by local communities, with characteristics similar to the rest of the country: mainly subsistence farming, on less than 2ha, highly dependent on rain, and making use of little or no improved farming technologies and techniques. The main crops include maize, sorghum and beans. The main cash crops produced in the region are tobacco and cotton. Access to water remains a challenge for the inhabitants of both Tete and Moatize.

Investment in transport and other infrastructure in Tete is a result of the economic growth in the region, emerging particularly from the coal mining industry. As with the Beira and Nacala Corridors, the Tete corridor is strategically located in terms of provided access to Mozambique's landlocked neighbors Malawi, Zimbabwe and Zambia in terms of transportation of goods and services.

Issues raised by participants of the public consultations in Tete and Moatize included: Land conflicts and water supply shortages are common both in Tete and Moatize, particularly in relation to agriculture and obstruction of fields.

Once construction and rehabilitation works are concluded, particularly close for famer fields, efforts should be employed to restore the areas of work as they pose a threat to the production output of farmers.

4.5.4 Nacala-City

Nacala- City is a city located in the northern province of Nampula, at a distance of about 200 km from the city of Nampula. Nacala City has the third largest harbor in the country after the one in Maputo and Beira and is considered the deepest port on the east coast of Africa. Unlike Beira and Manica, Nacala is a railway terminal that connects with Malawi, and is also located strategically in terms of providing access to the port to landlocked neighboring countries. Nacala is located in a region with sub-humid dry tropical climate (i.e. a tropical climate with a dry season). The dry and cold season is from May to November, while the hot and humid season is from December to April. Average annual temperatures are around 25.9 oC, and July is considered the coldest month, with an average temperature of 23.5 oC while the warmest month is December with an average temperature of 27.6 oC. In terms of extreme weather events, Nacala is influenced by the monsoon winds, with north winds prevailing from October to February, and south winds from March to September. The city is located in the area of influence of cyclones originating in the Indian Ocean, but is not often hit by tropical cyclones, but by tropical depressions with heavy rains. Nacala is affected by severe soil erosion, particularly in the non-urbanized informal settlement areas.

In terms of demographic data, the total population is approximately 254.624 of which over 90 000 live in slums and/or in informal settlements. Like other Mozambican cities, Nacala's population continues to grow rapidly. The most densely populated areas are located around the rail and port areas which are mainly unplanned settlements. It is estimated that 55% of the population in Nacala has access to water.

In terms of the economy, the Nacala Special Economic Zone (SEZ), which was launched in 2009, has seen an increase in investments originating in Mozambique and from international sources. The zone comprises the Nacala-Velha and the port districts including Nacala-City. Its position on the Mozambican east coast, its natural conditions and the existence of a deep-water port, underlie the importance and functions of this urban center. The existence of the Port and railway infrastructure constitutes the Regional Transport Corridor, known as the Nacala Corridor, which gives to Nacala city great potential for economic development and opportunities for formal employment for the inhabitants of the city. Unfortunately, this has not materialized to date as the

majority of the population of Nacala-City depends on subsistence farming, fishing and informal trades for their livelihoods.

4.5.4.1 Nacala City Water Supply System

Nacala City's main water supply consists of a water treatment plant and a transmission main from the Nacala Dam. The existing Nacala Water Supply System is at an advanced stage of degradation. The Nacala Dam (administratively located at Nacala-a-Velha District) was rehabilitated by the Millennium Challenge Corporation in 2013. However, the losses between the existing intake and transmission systems are reportedly high, with the transmission system experiencing frequent breakages due to ageing (i.e. the transmission line is about 30 years old). Heavy rains tend to cause erosion in the areas where the transmission line has been installed. Therefore, urgent rehabilitation is required for both the treatment plant and the transmission main to secure efficient and good quality water to the residents of Nacala, once one of the fastest growing cities in the country.

The following issues and concern are ongoing and affect the Nacala region:

- Modification of topography through vegetation clearance, tree cutting and opening of access roads and paths for vehicles and for agricultural purposes and the water transmission mains;
- Increased soil erosion through intensive extraction of sand for construction materials, exploration of existing borrow-pits, as well as any other activities impacting on the removal of soil horizons;
- Contamination of soil and water resources by fuels, oils, fungicides and chemicals in general through contamination from point sources such as oil-derived hydrocarbons (fuels, solvents and lubricants), from known single source such as construction sites;
- Sedimentation of drainage structures and flooding of areas largely through the erosive processes that provide large amounts of sediments – Nacala is prone to erosion;
- Suppression of vegetation and wildlife habitats through the clearing of natural vegetation during establishment or operation of different projects in the area.

During the public consultation meetings in Nacala-City, the following issues of concern were raised:

- There is a major shortage/ lack of water supply in schools in Nacala;
- Nacala is experiencing a population expansion and its inhabitants are moving towards peri-urban areas which have limited access to water.

4.5.5 Pemba

Pemba is located in the northern region of the country, in the Province of Cabo Delgado on the southern peninsula of the Bay of Pemba. The Bay of Pemba is the closest natural deep water bay to the Rovuma offshore basin and supports existing terminal operations at the Port of Pemba. The Bay of Pemba is located 200 km north of the Port of Nacala. The shoreline within Pemba is well

protected and characterized by intertidal mudflats, sandy beaches and extensive mangroves; whilst the shoreline on the seaward side is characterized by sandy beaches; and the shoreline within the bay is considered to be stable with no evidence of littoral movement within the bay. The temperatures in Pemba vary.

Agriculture and fishing are the dominant economic activity and the majority of the population is employed by the informal sector. Tourism is also big economic sector for the Cabo Delgado Province, and Pemba has become an important center for northern Mozambique's offshore natural gas industry.

Pemba City is divided into nine neighborhoods, with a mix of urbanized areas and informal high density settlements. The city has a population size of 162.726 and approximately 69% has access to water. As with most urban areas in Mozambique, more and more informal settlements continue to grow in a disorganized manner in Pemba especially in fragile slopes and flood plains. Water supply in Pemba is still very low, and one of the major challenges the city faces is poor sanitation as well as poor storm water drainage.

The main issues of concern that were raised at the public consultation included:

- Apart from water supply, quality is a major issue in Pemba.
- Coordination with other local service providers/ structures is crucial.

5 OVERVIEW OF MOZAMBIQUE'S ENVIRONMENTAL POLICIES, LAWS, PROCEDURES, REGULATORY AND ADMINISTRATIVE FRAMEWORKS

5.1 Summary

As a consequence of the Rio Conference on Sustainable Development in 1992, Mozambique like other African countries has undergone major legal and institutional reforms in the environmental sector. The country has adhered to a number of international conventions and protocols for the protection of the environment, and as a result continues to improve the legislation on many sustainable development issues in the country to ensure that Mozambicans enjoy quality living conditions.

The Ministry of Land, Environment and Rural Development (MITADER) is the Government institution responsible for ensuring the preservation and responsible use of natural resources including land, the coordination of environmental activities and environmental licensing. The Provincial Directorates of Land, Environment and Rural Development (DPTADER) and in some cases District Services for Infrastructures and Planning (Serviços Distritais de Planeamento e Infraestruturas - SDPI) are the local representatives of MITADER.

This section provides a summary of environmental protection and related policies, laws and regulations in Mozambique, particularly those of relevance to the Project.

5.2 The Constitution

The 2004 Constitution of the Republic of Mozambique gives all citizens the right to live in a safe environment as well as the obligation to preserve it. The key objective of the clause related to the environment in the Constitution is to provide a legal framework for a proper use and management of the environment and its components, for the achievement of sustainable development in the country. This achievement involves proper management of the environment for the creation of conditions that guarantee health and well-being, socio-economic and cultural development of communities and the conservation of natural resources.

The state is also required by the Constitution to guarantee the sustainable use of natural resources and ecological stability for future generations and to promote land use planning in order to ensure that activities take place in the correct locations and that such activities contribute to balanced socio-economic development. The 2004 Constitution also creates an obligation on communities to protect the environment.

5.3 Environmental Legislation

The 1995 National Environment Policy in Mozambique, Resolution n° 5/95, establishes the basis of all environmental legislation in the country. According to its Article 2.1, the main objective of this policy is to ensure sustainable development in order to maintain an acceptable balance between socioeconomic development and environmental protection. To achieve the above objective, the policy must ensure, among other requirements, the management of natural resources in the country and the environment in general - in order to preserve their functional capacity and production for present and future generations.

The 1997 Environmental Law (Law no 20/97) sets the environmental foundations for the policy and institutional framework for environmental management in Mozambique. The Law establishes the scope, institutions and appropriate management tools to deal with environmental management issues.

The Ministry of Land, Environment and Rural Development (MITADER) is the main government entity with the responsibility for coordination of government actions related to environment. With the recent changes in the designation of the Ministry, it is not yet clear what the new structure will comprise of based on addition of areas to its mandate. It is possible however, to ascertain that MITADER has the following competencies:

- Inter-sectoral coordination of environmental issues
- Wildlife, Forestry and Ecosystems protection and conservation
- Promotion of Rural Development
- Research planning and environmental management
- Territorial planning and land management
- Environmental impact assessments
- Environmental education and dissemination of information; and
- Inspection and control *inter alia*.

In terms of principles to be followed for sustainable development, the Environmental Law of 1997 establishes the following:

- the use and rational management of natural resources;
- recognition and value of community knowledge and traditions;
- environmental management based on preventive systems;
- integrative management;
- citizen participation; and
- responsibility.

At national level, MITADER has the responsibility to guide the implementation of environmental policies and to coordinate the sustainable planning and use of natural resources of the country. At the provincial level, MITADER is represented by the Provincial Directorates of Land, Environment and Rural Development 3 (DPTADERs). At district level MITADER's representation is rather diluted within the District Services for Infrastructure and Planning within the Ministry of Public Works, Housing and Water Resources (MOPHRH). This department is responsible for handling issues related to land use planning, as well as any issue related to environmental protection.

The Environmental Impact Assessment (EIA) is recognized to be a vital procedure for an effective development planning and is therefore a determinant watershed for environmental protection in the country. It includes provisions for ESIA, Environmental and Social Management Plans (EMP), and environmental auditing.

Mozambique's EIA is regulated by the Decree 54/2015 of December 31. The EIA regulation establish four EIA categories, namely:

- **Category A+**. For projects with likely significant environmental and social impacts where decision-making is reserved for the central level, and where a full ESIA is required to be

undertaken and supervised by Independent Specialists Reviewers with verifiable experience;

- **Category A** - For projects with likely significant impacts where decision making is reserved for the central level, in these instances a full ESIA is required;
- **Category B** - For projects with impacts considered less significant or which require less complex mitigation measures decisions are made at provincial level, for instance, when a simplified ESIA is required;
- **Category C** - Is for small projects that may not require an ESIA, but must follow the regulations for environmental impact assessment. For these projects, decisions are also made at provincial level. The decree 54/2015 of December 31 therefore has decentralized the levels of decision making in the ESIA process, transferring decision powers from the national level to the *DPTADERS*, which are the entry points for development projects applications (*Instrução do Processo*).

The EIA process is further regulated by the General Directive for Environmental Impact Studies (Ministerial Diploma n° 129/2006 of July 19) which provides guidance on the assessment of the environmental and social effects of projects.

The Environmental Audit and Environmental Inspection are regulated by Decrees No. 25/2011 (of June 15) and No. 11/2006 (of June 15) respectively. The Regulation on Environmental Audit Process indicates that public or private activities are subject to public environmental audits conducted by MITADER as well as private entities. According to this regulation, audited entities are required to provide to the auditors full access to the sites to be audited, as well as all information that may be required during the auditing process. Meanwhile, the Regulation on Environmental Inspections (Decree No. 11/2006 of June 15) regulates the mechanisms for inspection of public and private activities, which directly or indirectly are likely to cause negative environmental impacts. This decree aims to regulate the activity of supervision, control and surveillance of compliance with environmental protection measures as recommended for development projects.

The Mozambican Environmental Law also establishes that an EIA must be undertaken for all development projects, policies, plans and programs that may have a significant impact on the environment, and recognizes the need to guarantee the participation of local communities and to utilize their knowledge and human resources in the protection of the environment.

Within the context of project ESIA, a Ministerial Diploma no 130/2006 of July 19 was introduced to stress the need for and importance of public participation process, which seeks to integrate non-experts' views into ESIA decision-making process, by allowing individuals and civil society to voice their concerns with regards to environmental sustainability of proposed projects. For Category A+, A, and B Projects, Public Participation through public consultation is mandatory as referred to in the decree 54/2015 of December 31, number 6 of Article 15.

5.4 The Land Law

In Mozambique land issues are governed by the Land law 19/97 of October 1st, 1997 and its Decree 66/98 of December 8th, 1998. The country is said to have one of the most progressive land laws in Africa mainly because it safeguards the rights of its population over land and natural

resources whilst promoting investments and sustainable use of resources. The Law clearly provides that “land is property of the state and cannot be sold or otherwise alienated, mortgaged or seized” (Art. 3 of the Land Law). Land is attributed in the form of a 50-year renewable lease known as a Land Title or DUAT (Direito de Uso e Aproveitamento de Terra) in Portuguese. The prerequisites for the acquisition of the DUAT differ for national and foreign subjects. According to the Land Law, the acquisition process requires the judgment of local administrative authorities, and a consultation with the corresponding communities to ensure that the area in question is free and unoccupied (Art. 13, 19/97).

5.5 Legislation on Water and Water Rights

The Mozambican Constitution of 2004 provides that all water resources are owned by the state. In terms of the actual management of water and water rights, the 1991 Water Law 16/91 of August 3rd 1991 is the key legal and regulatory framework. Similar to land, Water Law stipulates that water is of public domain, that it is inalienable and imprescriptible, and that rights to its use shall be conferred by the State (Art. 1 (3)). In general terms the law makes provisions for the management of water and the acquisition of water rights. The objective of the Law is to provide a general legal framework governing the activities of protection and conservation, inventorying, use and appropriation, control and monitoring of water resources. Directives are provided for water management policy, which include the roles and responsibilities of the State in the promotion, creation of guidelines and regulation of the use of water in different sectors including agriculture.

Art. 21 of the Law makes a distinction between water for common use and water for private use. Common use includes household consumption as well as smallholder agriculture on up to 1ha of land (but excludes irrigation or usage of water with mechanical equipment). The use of water under this category is not subject to a license or concession. It is important to highlight that this group is prioritized. In terms of the second category, water for private use, the Water Act makes provisions which include compulsory licensing or concessions for use and appropriation which is accessible to any individual or collective person, public or private, national or foreign, duly authorized to act in the national territory in terms of the law, and provided that they do not place the ecological equilibrium or the environment at risk.

The Water Licenses and Concessions Regulation (Regulamento de Licenças e Concessões de Águas) for the private use of this resource, is set out in Decree 43/2007 of October 30, and is applicable only to waters that lie outside the action of the tides and/or whose water bodies (lakes and lagoons) communicate with the sea only during spring tides. For water concessions, a set of documentation must be submitted to the Regional Water Administration 4(ARA), including a description of the proposed use, economic justification and technical description.

In terms of provisions on pollution management, the legal and regulatory framework concerning the prevention of pollution and the safe use of chemicals is broadly provided for under the Environmental Law 20/97 however, sector specific regulatory frameworks are also available in

⁴ *Administração Regional de Água* in Portuguese. There are 5 ARAs that serve the different regions of the country: ARA-Sul is responsible for the river basins in southern Mozambique; ARA-Centro, for the central region; ARA-Norte is responsible for the northern region; ARA-Centro Norte for the central and northern regions of the country; and ARA- Zambeze focuses on activities around the Zambeze Hydrographic basin.

this regard. Article 52 of the Water Law for instance, stipulates that water in the public domain should be protected against contamination, and that the accumulation of toxic or hazardous compounds that may contaminate water should be prevented. Article 54 of the of the same Law stipulates that any activity with the potential of contaminating or degrading public waters, particularly the discharge of effluents, is subject to a special permit to be issued by the Regional Water Administration (ARA), and the payment of a fee. For water management, Mozambique has a specific regulation, Decree 13/2006 of 15 June, which lays down rules concerning the production, deposit on soil and subsoil, throwing to the water or to the atmosphere, of any toxic and polluting substances, as well as the practice of polluting activities which could accelerate impairment of the environment, in order to prevent or minimize their negative impacts on the health and environment. These articles although sector specific, are in conformity with the provisions around pollution and contamination of the environment stipulated in the Environmental Law.

5.6 Public Consultations Process

The Ministerial Diploma n° 130/2006 of July 19 and the Decree 54/2015 of December 31 make provisions for the Public Consultation Process. These legal instruments define the basic principles related to public participation, methodologies and procedures that should be used. It considers public participation an interactive process that begins in the design phase and continues throughout the lifetime of the project. Both of these documents establish the need for conducting public consultations with affected and interested persons that may be affected by an activity or project directly or indirectly.

For Category A+, A, and B activities, public consultations are compulsory; whilst for Category C is not required.

5.7 Labor law

The Mozambican Labor Law 23/2007 of August 1st, currently under review, makes provisions for individual and collective persons in relation to remunerated work or labor in the country. For the purposes of the current ESMF, the Chapters I (General Provisions), III (Individual Work Relations) and IV (Hygiene, Safety and Health of Workers) of the Labor Law are highlighted, however all provisions stipulated under the law should be observed.

The law makes special provisions for women workers, child labor, and health, safety and hygiene in the workplace. The legal framework in Mozambique for the latter goes beyond the Labor Law and includes the Constitution of 2004, the ILO Conventions related to the matter and other regulations such as the Judicial Regime on Work Related Accidents and Work-Related Illnesses. The Constitution makes provisions for the right to retribution and safety in the workplace as well as the right to healthcare. Article 85 (2) stipulates that all workers shall have a right to protection, health and safety at work, and Article 89 stipulates that all citizens shall have the right to health and medical care and shall have the duty of promoting and protecting public health. Such provisions shall be abided to during the implementation of the WASIS II project.

5.8 Contracting for Public Civil Works

Mozambique has recently approved legislation related to the Contracting of Contractors for Public Civil Works, Goods Supply and Provision of Services, Decree 5/2016 of March 8th. This legislation has provisions ranging from procedures for contracting of contractors for public civil works, goods and service provider to the management of such contracts, to claims and appeals. Of relevance is Article 160 on Safety and Discipline on Site. Article 160 stipulates that the contracting party should demand a Health and Safety Plan from the contractor; that the contractor is obliged to guarantee safety in the construction site and places of work and should abide by the legislation on health, hygiene and safety in the workplace; the contractor should maintain a reliable signpost signaling system in the construction site and especially where works are being carried out on public roads; and the contractor should ensure discipline and order in the site location and areas of work. The WASIS II project shall comply with the provisions of this decree in terms of the management of the contractors that are to implement the construction/rehabilitation activities.

5.9 Resettlement Process

Regulations on the Resettlement Process resulting from Economic Activities (Decree 31/2012 of August 8) establishes the basic rules and principles on the resettlement process for the purpose of providing the opportunity to improve the quality of life of affected households. Article 4 lists the principles guiding the resettlement process resulting from the public and private activities. These include principles on social cohesion; social equality; direct benefit; social equity; non-change of income level; public participation; environmental accountability; and social responsibility. This Decree makes provisions for the resettlement process, including planning, provides the rights of the affected populations and makes provisions for fines in the event of non-compliance.

The Resettlement Policy Framework (RPF) elaborated in parallel to the current ESMF provides more details on the legal and guiding frameworks of the resettlement process in Mozambique and taking into account the World Bank Involuntary Resettlement Policy OP 4.12 and provides specific guidance and steps to be followed to either avoid resettlement or mitigate any potential adverse impacts where this is unavoidable.

6 OVERVIEW OF THE WORLD BANK'S SAFEGUARD POLICIES

6.1 Summary

The World Bank's Environmental and Social Safeguard Policies are considered a cornerstone of its support to sustainable poverty reduction. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide guidelines for Bank and borrower staffs in the identification, preparation and implementation of programs and projects. The effectiveness and development impact of projects and programs supported by the Bank has substantially increased as a result of attention to these policies. Safeguard Policies have often provided a platform for the participation of stakeholders in project design, and have been an important instrument for building ownership among local populations.

The World Bank's ten safeguard policies aims at ensuring environmental and social sustainability of actions proposed for financing, and to ensure better decision making. These Operational Policies include:

- OP 4.01 Environmental Assessment;
- OP 4.04 Natural Habitats;
- OP 4.09 Pest Management;
- OP 4.11 Cultural Heritage;
- OP 4.12 Involuntary Resettlement;
- OP 4.10 Indigenous People;
- OP 4.36 Forests;
- OP 4.37 Safety of Dams;
- OP 7.50 Projects on International Waterways;
- OP 7.60 Projects in Disputed Areas.

The WB, through its Disclosure Policy BP 17.50 requires that all safeguard documents are disclosed in the respective countries as well as at the WB's Website prior to the appraisal or for Fast Tracking Initiatives prior to signing of a Grant Agreement.

6.2 Safeguard Policies triggered by the Project

The WASIS II Project will involve some civil works - construction and rehabilitation of water points, drainage and storage systems inter alia as mentioned in the Project Description, and therefore is likely to cause certain negative environmental and social effect. Consequently, WASIS II triggers the WB's Operational Policies, specifically the Environmental Assessment (OP/BP 4.01); Safety of Dams (OP/BP 4.37) and Involuntary Resettlement policies (OP/BP 4.12) and Physical and Cultural Resources (OP 4.11) as described below.

TABLE 1: SAFEGUARD POLICIES TRIGGERED BY THE PROJECT

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)		X
Forests (OP/BP 4.36)		X
Pest Management (OP 4.09)		X
Physical Cultural Resources (OP/BP 4.11)	X	
Indigenous Peoples (OP/BP 4.10)		X
Involuntary Resettlement (OP/BP 4.12)	X	
Safety of Dams (OP/BP 4.37)	X	

6.2.1 OP 4.01 Environmental Assessment

The aim of OP 4.01 is to ensure that WB-financed projects are environmentally and socially sustainable, and ensure better decision making through integration of environmental and social impact considerations throughout planning and implementation of development actions. The main objectives of Environmental Assessment (EA) is to ensure the consideration of environmental aspects (air, water, and land), human health and safety, social aspects (involuntary resettlement, local communities and cultural heritage), as well as consideration of trans-boundary and global environmental effects such as climate change. OP 4.01 is applicable whenever a proposed project or actions have the potential to cause negative environmental effects to its surroundings.

The projects are classified into one of the following four categories depending on the type, location, sensitivity and scale of the project and the nature and magnitude of potential environmental impacts.

- **Category A:** A proposed project is classified as Category A if it is likely to result in significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect a more extensive area than the sites or facilities where physical activities take place. The Environmental Assessment for a Category A project examines the potential negative and positive environmental impacts, compares them with those of other feasible alternatives (including the situation without the project.) and recommends necessary measures to avoid, minimize, mitigate or compensate for adverse and improve the environmental performance impacts. For a Category A project, the proponent is responsible for preparing a report, usually an Environmental and Social Impact Assessment (ESIA) with its respective Environmental and Social Management Plan (ESMP) or environmental auditing as required.
- **Category B:** A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas, including aquatic ecosystems, forests, grasslands and other natural habitats, are less adverse than those provided for Category A projects. These impacts are specific to the project site; few if any of them are irreversible, and in most cases the identification of mitigation measures is faster for projects of this Category than for Category A. Just as is the case for Category A projects, the potential negative environmental impacts are examined recommendations made on measures needed to prevent, minimize, mitigate or

compensate for adverse impacts and improve environmental performance. For category B projects with minimal social and environmental impacts, the preparation of the Environmental and Social Management Plan based on the ESMF guidelines is sufficient.

- **Category C:** A proposed project is classified as Category C if the possibility of adverse environmental impacts is minimal or non-existent. Beyond screening, no further EA action is required for a Category C project.
- **Category FI:** A proposed project classified in Category FI engages investment funds from the World Bank through a financial intermediary, in subprojects that may result in adverse environmental impacts.

WASIS II has been classified as **Category B. This Categorization will not change with the WASIS II -AF** as some of the proposed activities may result in adverse environmental and social impacts which are expected to be site specific and can be mitigated or avoided with an Environmental and Social Management Plan or through design measures. Potential negative environmental and social impacts are likely to result from the rehabilitation and construction activities which may include soil erosion, soil, surface and groundwater pollution, air pollution, loss of vegetation, public health impacts such as traffic hazards, noise, dust, and disruption of social and cultural practices. These impacts, if not mitigated have the potential of affecting a more extensive area, beyond the Project sites or the areas where physical activities will occur.

Once subprojects have been defined, an evaluation through simple environmental and social impact assessment (ESIA) and specific Environmental and Social Management Plan (ESMP) based on the results of the analysis / social and environmental screening will be prepared by experts in environmental and social areas, health and safety for specific areas of implementation of the Project. The costs for carrying out such evaluation will be included in the Project budget. The results of the selection and the determination of categories of sub-projects will be confirmed and approved by MITADER to verify compliance with the Mozambican Environmental Impact Assessment Decree. Hence the present ESMF is elaborated to focus on those potential environmental and social effects likely to occur during the rehabilitation/construction and operation activities under the WASIS II Project areas.

6.2.2 OP 4.09 Physical Cultural Resources (OP/BP 4.11)

This policy addresses the need to preserve the Physical Cultural Resources (PCR), and avoid their destruction and/or damage. Physical cultural resources are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious (including graveyards and burial sites), aesthetic, or other locations with cultural significance. They may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community.

The WASIS II – AF project should address any possible impacts on physical cultural resources, as an integral part of the environmental and social impact assessment (ESIA) process. If the project

is likely to have adverse impacts on physical cultural resources, the project proponent should identify appropriate measures for avoiding or mitigating these impacts as part of the ESIA process.

At this stage, it cannot be ascertained whether some project target areas are located in or nearby natural features and landscapes, however the nature and scope of the proposed activities suggest triggering OP 4.11 to ensure that any cultural resources are identified and properly managed. Should this be confirmed during the specific identification and selection of sites, the Chance Finds Procedure (CFP) approach shall be used in the event of previously unknown physical or cultural resources that are exposed or found during the lifecycle of a project, and appropriate measures should be taken to ensure that natural features and landscapes are not destroyed, and/or that mitigation measures are put in place to reduce damage. Furthermore, future activities related to installation of the 33 km of water transmission main as well as the construction of water distribution centers may trigger this safeguard, particularly in relation to religious sites such as family graveyards and burial sites. Chance find refers to any cultural heritage sites or associated material encountered during construction works, excluding those found in the course of an intentional archaeological investigation. It includes, but is not limited to artefacts, archaeological deposits, ruins, monuments and human remains.

Potential adverse impacts and specific mitigation measures have been provided in the ESMP and the ESMF mitigation matrix included in this document. The RPF being prepared in parallel to this document, will also presents the guidelines for management of physical cultural resources in the Environmental Assessment and provides a plan for mitigating adverse impacts.

6.2.3 OP 4.12 Involuntary Resettlement

The key objectives of this operational policy are to:

- (i) avoid or minimize involuntary resettlement scenarios, where possible and examine all viable alternative project designs;
- (ii) support affected persons in restoring/improving their former living standards, income generation and production capacities, or at least in restoring them;
- (iii) encourage community involvement in planning and implementing resettlement actions, and to
- (iv) provide assistance to affected people regardless of the legality of land tenure.

The policy does not only cover physical displacement, but also any loss of land or other assets associated with the proposed actions resulting in:

- relocation or loss of shelter;
- loss of assets or access to assets; and
- loss of income sources or means of livelihood, whether or not the affected person is to reallocate to a new area.

This operational policy is also applicable to the involuntary restriction of access to legally demarcated conservation areas such as parks and other protected areas resulting in adverse impacts on the livelihoods of the displaced persons. For the purpose of the RFP prepared under the remit of the WASIS II, whenever land acquisition is necessary for the foreseen works, the Project

proponent (FIPAG) shall comply with guidance established by the RPF which has been prepared separately and in parallel to the present ESMF.

6.2.4 OP 4. 37 Safety of Dams

The objective of this Operational Policy is to ensure that due consideration is given to the safety of dams in projects involving construction of new dams, or that may be affected by the safety or performance of an existing dam or dams under construction. OP 4. 37 considers the protection of downstream populations, ecosystems and investments from consequences of dam failure; ensuring dams are properly designed, constructed and monitored.

The World Bank makes a distinction between small and large dams, and this distinction is based on the height of the dam and the reservoir capacity. Small dams are normally less than 15 meters in height and include farm ponds, local silt retention dams, and low embankment tanks. Large dams are 15 meters or more in height. Dams that are between 10 and 15 meters in height are treated as large dams if they present special design complexities--for example, an unusually large flood-handling requirement, location in a zone of high seismicity, foundations that are complex and difficult to prepare, or retention of toxic materials.⁵ Dams under 10 meters in height are treated as large dams if they are expected to become large dams during the operation of the facility.

WASIS II – Additional Financing will trigger this Operational Policy since the proposed Nacala Water Supply Project will abstract water from the existing Nacala Dam to supply the cities of Nacala City and Nacala-a-Velha. It is of note that Dam Safety Plans and Dam Safety Assessments are being undertaken as a separate study from the present ESMF-Additional Financing. The findings of the situational environmental analysis of abstraction of water from the Nacala Dam would be incorporated within the scope of the EIA process for the Nacala Water Supply System.

6.2.5 World Bank Policy on Disclosure of Information

As part of the World Bank's recognition of the right to information, the institution has developed information disclosure policies which generally contain the following elements: principles of disclosure; exceptions to disclosure; routine disclosure; and request driven disclosure. Disclosure of documents (including a summary of the project, and a summary of Environmental Assessment) should be in the local language, at a public place accessible to project-affected groups and local non-governmental organizations. In-country disclosure of information is the responsibility of the borrower, in this case FIPAG. Disclosure in the World Bank Website is the responsibility of the World Bank.

Document that need to be disclosed include:

- Integrated Safeguards Data Sheet
- All Safeguard mitigation plans:
 - Environmental Assessment/ Environmental and Social Management Plan
 - Resettlement Action Plan, Policy Framework or Process Framework
 - Indigenous Peoples Plan

Timing of Disclosure and Consultation

- Draft documents should be made available to stakeholders well in advance of consultations;
- All required public consultations should be completed, and draft or final documents disclosed prior to the project Appraisal;
- Final documents (incorporating results of consultations) should be disclosed for the record.

For the present ESMF document, information disclosure was initiated with the advertisement of the public participation meetings held in the six of the nine provinces covered by the WASIS II project. The meetings provided an opportunity for stakeholders to provide comments and useful inputs to be taken into consideration when planning and implementing the proposed WASIS II project. As the ESMF has now been drafted, it is proposed that the disclosure process be through continued interaction with stakeholders using contacts gathered during public meetings. E-mail contacts shall be used to inform that the ESMF document has now been drafted and it is available in the FIPAG Web Page (www.fipag.co.mz). The E-mail to stakeholders will also include the executive summary of the present ESMF (Portuguese version), and stakeholders shall be invited to provide further comments as needed. A public advert shall also be sent to *Jornal Noticias* (most widely distributed and read newspaper) to inform stakeholders of the availability of the ESMF document for review and comments. FIPAG shall appoint the contact person whom comments shall be sent to by stakeholders. Additionally, FIPAG shall ensure the availability of the full ESMF in Portuguese in its offices in all cities with FIPAG presence, including those not covered by WASIS II.

6.3 Complementary World Bank Instruments

6.3.1 Code of Conduct and Gender based-violence

This ESMF recognizes the need to put in place measures to prevent and respond to incidents of sexual exploitation, and any other form of gender-based violence (GBV). In order to put in place such measures, the project shall take a collaborative approach to prevention against project-related risks of sexual exploitation and abuse.

An effective code of conduct shall comprise obligations on all project contractors, taking into consideration specific cultural aspects of the project sites, and projects' need with a view to address the following issues:

- Compliance with relevant laws, rules and regulations;
- Compliance with applicable health and safety requirements (including wearing prescribed personal protective equipment (PPE), accidents prevention and a duty to report conditions or practices that pose a safety hazard or threaten the environment);
- Non-Discrimination (for example on the basis of family status, ethnicity, race, gender, religion, language, marital status, birth, age, disability, or political conviction);
- Interactions with community members (for example to convey an attitude of respect and non-discrimination);
- Sexual harassment (including use of inappropriate language or behaviour, in particular towards women or children, or any other, harassing, abusive, sexually provocative, demeaning or culturally inappropriate treatment of community members);

- Violence or exploitation women (including exchange of money employment, goods, or services for sex, including sexual favours or other forms of humiliating, degrading or exploitative behaviour);
- Protection of children (against abuse, or otherwise unacceptable behaviour with children, limiting interactions with children, and ensuring their safety in project areas);
- Sanitation requirements (to ensure workers use specified sanitary facilities provided by their Employer/accommodation and not open areas);
- Avoidance of conflicts of interest (such that benefits, contracts, or employment, or any sort of preferential treatment or favours, are not provided to any person with whom there is a financial, family, or personal connection);
- Respecting reasonable work instructions (including the need for environmental and social protection);
- Protection and proper use of property (prohibit theft, carelessness or waste of resources);
- Duty to report violations of Code of Conduct;
- Non-retaliation against workers who report violations of the Code of Conduct, if that report is made in good faith.

The Code of Conduct shall be a brief but clear document, written in plain language, and translated to local languages as needed, and signed by each worker to indicate that they have:

- received a copy of the code;
- had the code explained to them;
- acknowledged that adherence to this Code of Conduct is a condition of Employment; and
- understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

6.3.2 Temporary Project Induced Labor Influx

WASIS II project will require a labor force and other goods and services that may not be locally sourced due to lack of local technical skills and capacity. Besides the influx of labor others will also follow with the aim of selling goods and services or even pursuit of job opportunities. The influx of labor and others to the project sites may certainly lead to increased demand for local social services, as well as goods and services which ultimately push prices of goods upward, increased volume of traffic, higher risks of accidents, increased demand on ecosystems and natural resources, social conflicts within and between communities, increased risks of communicable diseases, as well as increased rates of illicit behavior and crime.

While these risks may be identified in the ESIA, as others emerge as the project progress in the implementation cycle, there will be a need to develop site-specific measures before the contractors initiate work and update these measures as the project is implemented.

The box below provides the principles as identified by the World Bank to assess and manage the risks of adverse impacts on communities resulting from temporary project induced labor influx.

Box 1: Principles of Managing the Risks of Adverse Impact on Communities from Project Temporary Induced Labor Influx

**BOX 1: PRINCIPLES OF MANAGING THE RISKS OF ADVERSE IMPACT ON COMMUNITIES FROM PROJECT
TEMPORARY INDUCED LABOR INFLUX**

Reduce labor influx by tapping into the local workforce. The most effective mitigation measure against labor influx is to avoid or reduce it. Depending on the size and the skill level of the local workforce, a share of the workers required for the project may be recruited locally. This is generally easier for unskilled workers, while more specialized staff (typically required in smaller numbers) frequently will be hired from elsewhere. Depending on the requirements of the project and their skill level, it may be possible to train local workers within a reasonable timeframe to meet project requirements. This may be more likely if such trained staff are needed afterwards for the operation and maintenance of the new infrastructure.

Assess and manage labor influx risk based on appropriate instruments. The assessment and management of labor influx should be based on risks identified in the ESIA (if available), other Bank-required assessments, and the Bank's sector-specific experience in the country. Depending on the risk factors and their level, appropriate mitigation instruments need to be developed. This may range from broad requirements set out in the ESMP in a low-risk environment, to the need to develop more specialized instruments, such as a site-specific Labor Influx Management Plan and/or a Workers' Camp Management Plan (or other instruments with similar purpose) in a high-risk environment. Risk factors to consider include, but are not limited to, the following: (i) weak institutional capacity of the implementing agency; (ii) predominant presence of contractors without strong worker management and health and safety policies; (iii) anticipated high volumes of labor influx; (iv) pre-existing social conflicts or tensions; (v) weak local law enforcement, and (vi) prevalence of gender-based violence and social norms towards it in the community; (vii) local prevalence of child and forced labor.

Incorporate social and environmental mitigation measures into the civil works contract. Most adverse impacts from labor influx can only be mitigated by the contractor commissioned by the Borrower to carry out the works. It is therefore paramount that the responsibilities for managing these adverse impacts are clearly reflected as a contractual obligation, with appropriate mechanisms for addressing non-compliance. This allows the Borrower to enforce the implementation of such mitigation measures, which are required to ensure the Borrower's own compliance with Bank policy requirements. While the Bank reviews and clears project-level safeguard instruments (such as ESIA/ESMP) it is the Borrower's responsibility to: (i) ensure the safeguard instruments are reflected in the contractor's ESMP (CESMP), and (ii) ensure the project is implemented in accordance with the CESMP, safeguard instruments and other relevant contractual provisions.

Prior to commencement of the construction work, the contractor should submit to the supervising engineer the CESMP demonstrating that has sufficient capacity to implement and monitor the safeguards through allocation of funds and technical capacity. The borrower will actively participate in the process of assessing the risks, preparation of documents and appraisal and support in the implementation. The World Bank will provide overall technical advisory guidance.

6.3.3 CERC Section of the Environmental and Social Management Framework for WASIS II –AF - Addendum

This component supplements the ESMF for the WASIS II – AF Project to be implemented in Nacala, Nampula province. The project will be implemented by Investment Fund and Water Supply Asset Holder (FIPAG) under the responsibility of the Ministry of Public Works, Housing, and Water Resources (MOPHRH). The project’s objectives are to expand and rehabilitate the Nacala Water Supply System with a view to improving the availability of potable water to the benefit of the residents of Nacala Municipality. Specific WASIS II - AF activities include:

- a new water treatment plant with a capacity of 25,000 m³/day, increasing the overall production capacity in Nacala by 17,800 m³/day;
- a new transmission line to convey the water into the city; and
- rehabilitation and expansion of critical portions of the existing distribution network. These investments will increase the storage capacity of the city’s water supply system from 9,150 to 17,400 m³ and improve reliability and quality of services. Since most of the poor live in peri-urban areas in Nacala that are particularly affected by the water shortage, this increased in water supply will enhance their participation, particularly women, in local economic activities. Overall, an additional 80,000 people are expected to benefit from the improved water supply in Nacala.

This CERC Session of the ESMF defines supplemental information on the environment and social safeguard (ESS) requirements for the implementation of the proposed activities to be carried out under the Contingency and Emergency Response (USD0 Million), which intends to make resources available to respond to an eventual natural disaster. As mentioned above, the Ministry of Public Works, Housing and Natural Resources is the project owner leading with FIPAG as the project’s implementing entity through its delegated authority to plan and manage investment funds for the water supply sector. The GoM, through its National Institute for Disaster Management (INGC), leads the response to the disaster, and has an established structure to respond effectively to a disaster situation. In an event of disaster, FIPAG, will work with INGC as the CERC implementing entity to determine specific actions that need to be implemented as part of disaster response and post-disaster recovery process.

This document is prepared in line with the World Bank’s safeguard requirement (Guidance on CERC, October 2017). Recommendation is made that during the project implementation stage, the guidelines on this document be integrated in the emergency Response Manual (ERM), which should also cover environmental and social considerations of the actions to be implemented in the event of activation of CERC.

II. Identification of potential activities to be financed by CERC

In the event of CERC Component activation, the following activities will be covered: goods, services, and works as identified in the Positive List (Table A). The contingency activities could be implemented anywhere in Mozambique including areas outside the cities of Nacala which is targeted by the WASIS II-AF.

Given the nature of funding under CERC, that is generally to fund immediate priority activities for recovery in an event of natural disaster, activities to be funded should be as less complex as possible, i.e., those with minimal environmental and social implications. Projects with likelihood

of triggering resettlement or complex environmental mitigation measures should be avoided. Under the CERC.

TABLE 2: POSITIVE LIST OF GOODS, SERVICES AND WORKS THAT CAN BE FUNDED UNDER CERC (REFERENCE: CERC ESMF LAO)

Item
Goods
<ul style="list-style-type: none"> • Medical equipment and supplies; • Non-perishable foods, bottled water and containers; • Tents for advanced medical posts, temporary housing, and classroom/daycare substitution; • Equipment and supplies for temporary housing/living (gas stoves, utensils, tents, beds, sleeping bags, mattresses, blankets, mosquito nets, kit of personal and family hygiene, etc.) and school; • Gasoline and diesel (for air, land and sea transport) and engine lubricants; • Spare parts, equipment and supplies for engines, transport, construction vehicles; • Lease of vehicles (Vans, trucks and SUVs); • Equipment, tools, materials and supplies for search and rescue (including light motor boats and engines for transport and rescue); • Tools and construction supplies (roofing, cement, iron, stone, blocks, etc.); • Equipment and supplies for communications and broadcasting (radios, antennas, batteries); • Water pumps and tanks for water storage; • Equipment, materials and supplies for disinfection of drinking water and repair/rehabilitate of black water collection systems; • Equipment, tools and supplies for agricultural, forestry, and fisheries; • Feed and veterinary inputs (vaccines, vitamin tablets, etc.); • Construction materials, equipment and industrial machinery; • Water, air, and land transport equipment, including spare parts; • Any other item agreed to between the World Bank and the Recipient (as documented in an Aide-Memoire or other appropriate formal Project document); • Temporary toilets; • Groundwater boreholes, cargos, equipment to allow access to site, storage units.
Services
<ul style="list-style-type: none"> • Consulting services related to emergency response including, but not limited to urgent studies and surveys necessary to determine the impact of the disaster and to serve as a baseline for the recovery and reconstruction process, and support to the implementation of emergency response activities; • Feasibility study and technical design; • Works supervision; • Technical Assistance in developing TORs, preparing Technical Specifications and drafting tendering documents (Bidding Documents, ITQ, RFP); • Non-consultant services including, but not limited to: drilling, aerial photographs, satellite images, maps and other similar operations, information and awareness campaigns;

<ul style="list-style-type: none"> • Non-consultant services to deliver the activities described in the “Goods” section of this table (e.g., debris removal, dump trucks, drones survey).
<p>Works</p> <ul style="list-style-type: none"> • Repair of damaged infrastructure including, but not limited to: water supply and sanitation systems, dams, reservoirs, canals, roads, bridges and transportation systems, energy and power supply, telecommunication, and other infrastructure damaged by the event; • Re-establishment of the urban and rural solid waste system, water supply and sanitation (including urban drainage); • Repair of damaged public buildings, including schools, hospitals and administrative buildings; • Repair, restoration, rehabilitation of schools, clinics, hospitals • Removal and disposal of debris associated with any eligible activity.
<p>Training</p> <ul style="list-style-type: none"> • Conduct necessary training related to emergency response including, but not limited to the Implementation of EAP; • Training on rapid needs assessment and other related assessments.
<p>Emergency Operating Costs</p> <ul style="list-style-type: none"> • Incremental expenses by the Government for a defined period related to early recovery efforts arising as a result of the impact of an eligible emergency. This includes, but is not limited to: costs of staff attending emergency response, operational costs⁵ and rental of equipment.

III. Potential Environmental and Social Impacts

Actions for disaster relief and positive impacts would be urgently needed. The works and activities covered by CERC as seen on Table A are of small to medium scale in nature and of minimal, localized and temporary environmental and social impacts that can be minimized through effective implementation of safeguards instruments, and effective supervision by the supervising engineer or a Consultant hired for that purpose. The necessary mitigation measures will be included as part of the Environment and Social Management Plan (ESMP) to be prepared when if a specific subproject is known.

With regards to the social impacts, activities that will result in the involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households’ use of land and livelihoods should be avoided, since these would be time-consuming and costly activities. impacts. It is however of note that small-scale land acquisition actions as a result of emergency will not be eliminated, abbreviated resettlement action plans (ARAPs) will be prepared in line with the resettlement policy framework (RPF) and of the Project, taking into account the nature and flexibility of the emergency case.

In addition, workers contracted to carry out civil or other works for contingency activities, will have to sign a workers’ Code of Conduct, which covers issues such as preventing gender based

violence, as well as sexual assault and abuse. Similarly, construction works or uses of goods and equipment involving forced labor, child labor, or other harmful or exploitative forms of labor are prohibited.

TABLE 3: BELOW SUMMARIZES POTENTIAL IMPACTS OF THE PROPOSED ACTIVITIES/SUBPROJECTS

Table B. Potential impacts of the proposed activities to be carried out under Component 5 (CERC)			
No	Subprojects/Activities (nationwide)	Potential environmental and social impacts	Level of Significance
1	Repair of damaged infrastructure including, but not limited to,: water supply and sanitation systems, drainage systems, dams, reservoirs, canals, roads, bridges and transportation systems, energy and power supply, telecommunication, and other infrastructure damaged by a natural disaster event;	Increase dust, noise, vibration, water pollution, solid/hazardous/ Toxic wastes, waste oil/fuels, public health and safety; possible use of asbestos-contaminated as construction materials and land acquisition;	Moderate
2	Re-establish of the urban and rural solid waste management system, water supply and sanitation (including urban drainage);	Increase dust, noise, vibration, water pollution, Toxic wastes, waste oil/fuels, public health and safety; possible use of asbestos-contaminated as construction materials and land acquisition;	Moderate
3	Repair of damaged public buildings, including schools, hospitals and administrative buildings;	Increase dust, noise, vibration, water pollution, solid/hazardous/ Toxic wastes, waste oil/fuels, public health and safety; possible use of asbestos-contaminated as construction materials and land acquisition;	Moderate
4	Repair, restoration, rehabilitation of schools, clinics, hospitals;	Increase dust, noise, vibration, water pollution, solid/hazardous/ Toxic wastes, waste oil/fuels, public health and safety; possible use of asbestos-contaminated as construction materials and land acquisition;	Moderate

5	Removal and disposal of debris associated with any eligible activity	Waste management and disposal	Moderate
6	Disposal to medical wastes (at camp site, small clinic/hospitals), asbestos-based materials, other toxic/hazardous wastes	Increase health risks, need management of medical waste, toxic materials, asbestos-contaminated debris	Moderate
7	Temporary toilets	Hygiene, waste management	Moderate

To ensure that adverse impacts will not occur given the nature of emergency, the items and activities identified in Table C is prohibited.

TABLE 4: PROHIBITED ACTIVITIES FOR CERC	
1	Uses for goods and equipment financed by the CERC, which also applies to use and storage for Disaster Risk Management-related activities including hazard monitoring, disaster preparedness, and future response to natural disasters.
2	Activities of any type classifiable as Category A pursuant to the Association's Operational Policy (OP) 4.01 – Environmental Impact Assessment.
3	Activities that would lead to conversion or degradation of critical forest areas, critical natural habitats, and clearing of forests or forest ecosystems.
4	Activities affecting protected areas (or buffer zones thereof), other than to rehabilitate areas damaged by previous natural disasters.
5	Land reclamation (i.e., drainage of wetlands or filling of water bodies to create land).
6	Land clearance and leveling in areas that are not affected by debris resulting from the eligible crisis or emergency.
8	Activities that will result in the involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households' use of land and livelihoods.
9	Construction of new roads, realignment of roads, or expansion of roads, or rehabilitation of roads that are currently located on communal lands but will be registered as government assets after rehabilitation.
10	Construction works, or the use of goods and equipment on lands abandoned due to social tension / conflict, or the ownership of the land is disputed or cannot be ascertained.
11	Construction works, or the use of goods and equipment to demolish or remove assets, unless the ownership of the assets can be ascertained and the owners are consulted.
12	Construction works, or the uses of goods and equipment involving forced labor, child labor, or other harmful or exploitative forms of labor.
13	Construction works, or the uses of goods and equipment for activities that would affect indigenous peoples, unless due consultation and broad support has been documented and confirmed prior to the commencement of the activities.
14	Construction works, or the uses of goods and equipment for military or paramilitary purposes.
15	Construction works, or the uses of goods and equipment in response to conflict, in any area with active military or armed group operations.

16	Activities related to returning refugees and internally displaced populations.
17	Activities which, when being carried out, would affect, or involve the use of, water of rivers or of other bodies of water (or their tributaries) which flow through or are bordered by countries other than the Borrower/Recipient, in such a manner as to in any way adversely change the quality or quantity of water flowing to or bordering said countries.
18	Use of asbestos-based construction materials for reconstruction works

III. Environmental and Social Management Framework Process

Once the CERC component is activated, FIPAG, in coordination with the Municipalities and the INGC will undertake the following steps:

- Step 1: Preparation of the Environmental and Social Screening Form.** This form will be used also for screening of the CERC subprojects. The prohibited activities for CERC in Table 3 will also be applied to identify eligible activities to be financed. Given that the CERC objective is to support immediate priority activities (no more than 18 months), the activities or subprojects with significant resettlement issues will be avoided.
- **Step 2: Identification of Environmental and Social issues and preparation of respective mitigation measures.** Based on the results from Step 1, FIPAG and INGC will prepare an ESMP for the CERC activities highlighting the works/activities and mitigation measures to be conducted during detailed design, bidding/ contract, repair/restoration, and closure plans, taking into consideration the magnitude, scope, and nature of the emergency action being addressed. Consultation with local authorities and communities will be made during this stage. Should land acquisition be required, an abbreviated RAP will be prepared in close consultation with the provincial Directorate of Land, Environment and Rural development (DPTADR), and in consideration of the World Bank (WB) environmental and social and the required flexibility for the case of emergencies. Budget and entities responsible for implementation of the environmental and social management plans (ESMP) and abbreviated RAPs (ARAP) will be discussed and agreed as part of the plans.
- **Step 3: WB No Objection.** The ESMP, ARAP will be cleared by WB (pre or post) and then submitted to DPTADER for final approval.
- **Step 4: Implementation and M&E.** The approved ESMP and ARAP will be implemented according to the agreed implementation arrangement. The DPTADR in coordination with FIPAG will monitor the implementation of the impacts mitigation measures. Stakeholders engagement will be required at this stage as an opportunity for gathering concerns and providing feedback to the community.
- **Step 5: Completion and Evaluation.** At the completion of CERC, FIPAG, in coordination with INGC, will monitor the and evaluate the results prior to contract closure. Any pending issues and/or grievance must be solved prior to the defect liability period.

IV. Institutional Arrangement for Project Implementation

As mentioned above, MOPHDR through FIPAG will lead the implementation and coordinate with INGC and the targeted municipalities. FIPAG, as a responsible for overseeing the implementation

of the activities, will report on progress regarding implantation of the CERC activities, and will report to the Ministry of Public Works, Housing and Water Resources (MOPHRH).

7 GAPS IN MOZAMBICAN LEGISLATION AND IN THE WORLD BANK SAFEGUARD POLICIES

The major gap in the Mozambican legislation in relation to the World Bank Safeguard Policies is more on procedures and norms for handling health and safety for both the local population of a particular project area and/ or the project workers. The Mozambican Labour Law touches broadly upon safety in the workplace, however falls short in terms of making specific provisions for projects such as WASIS II. In order to bridge the gap on procedures for health and safety, the International Finance Cooperation (IFC) Performance Standards are recommended, as well as the World Bank Group (WBG) Environmental Health and Safety (EHS) General Guidelines. This section provides a description of the specific standard on health and safety to guide the project proponent throughout all phases of implementation of the project, and also provides some guidance on what mitigation measures should be taken.

Performance Standard 4 (PS 4) recognizes that project activities, equipment, and infrastructure often bring benefits such as employment and access to services however, they also have the potential of increasing exposure to risks and impacts arising from equipment accidents, structural failures, and releases of hazardous materials. Local inhabitants of the project areas may also be affected by impacts on their natural resources, exposure to diseases, and the use of security personnel.

The objectives of the PS 4 are to:

- avoid or minimize risks to and impacts on the health and safety of the local community during the project life cycle from both routine and non-routine circumstances; and to
- ensure that the safeguarding of personnel and property is carried out in a legitimate manner that avoids or minimizes risks to the community's health and safety.

The PS 4 requires that risks and impacts to the health and safety of the affected community during the design, construction, operation, and decommissioning of the project are identified and that preventive measures to address them are put in place. Where the project poses risks to or adverse impacts on the health and safety of affected communities, an Action Plan requires to be disclosed by the project proponent.

The following should be considered when assessing the potential risks related to health, safety and security:

- Infrastructure and Equipment Safety;
- Hazardous Materials Safety;
- Environmental and Natural Resource Issues (such as floods/ landslides etc);
- Community Exposure to Disease (such as water-borne illnesses etc);
- Emergency Preparedness and Response.

The project proponent (FIPAG) should assess the potential risks and impacts from project activities and inform affected local population of significant potential hazards in timely manner. It is also the responsibility of the project proponent to support and work with the project affected population and the local government structures to respond to any arising emergency.

The World Bank has elaborated and put in place Environmental, Social, Health and Safety (ESHS) Enhancements for Standard Procurement Documents (SPDs) and Standard Bidding Documents (SBDs), with a new procurement framework which came into force in 2016 and 2017. The ESHS enhancements shall be applicable for all new works contracts for which the relevant SBD/SPD. The following is required for all new bidders/ proposers/ contractors:

- Each Employer is required to set out clearly the minimum expectations of ESHS performance from the outset, to ensure that all Bidders/Proposers are aware of the ESHS requirements;
- Submit as part of their Bid/Proposal an ESHS Code of Conduct that will apply to their employees and sub-contractors, and details of how it will be enforced. The suitability of the Code of Conduct can be assessed and discussed as part of the Bid/Proposal evaluation and negotiations;
- The successful Bidder/Proposer is required to implement the agreed Code of Conduct upon contract award;
- Submit, as part of their Bid/Proposal, ESHS Management Strategies and Implementation Plans required to manage the key ESHS risks of the project;
- The suitability of these strategies and plans can be assessed as part of the Bid/Proposal evaluation, and discussed during pre-contract discussions, as appropriate. These strategies and plans will become part of the Contractor's Environmental and Social Management Plan (C-ESMP);
- Particular Conditions of Contract now include provisions relating to the (C-ESMP), e.g.:
 - a requirement that the Contractor shall not commence any Works unless the Engineer is satisfied that appropriate measures are in place to address ESHS risks and impacts;
 - at a minimum, the Contractor shall apply the plans and ESHS Code of Conduct, submitted as part of the Bid/Proposal, from contract award onwards.
- Provide an ESHS Performance Security (the sum of the two “demand” bank guarantees, normally not to exceed 10% of the contract price). The ESHS performance security is in the form of a “demand” bank guarantee.” The application of this provision is at the Borrower's discretion. It is recommended for contracts where there is significant ESHS risks as advised by Social/Environmental specialist/s;
- Demonstrate that they have suitably qualified ESHS specialists among their Key Personnel. Key Personnel must be named in the Bid/Proposal, and in the contract. The quality of the proposed Key Personnel (including ESHS specialists) will be assessed during the evaluation of Bids/Proposals. The Contractor shall require the Employer's consent to substitute or replace any Key Personnel;
- The Engineer may require the removal of Personnel if they undertake behavior which breaches the ESHS Code of Conduct, e.g. spreading communicable diseases, sexual harassment, gender-based violence, illicit activity, or crime;
- Contracts now contain specific ESHS reporting requirements. These relate to:
 - ESHS incidents requiring immediate notification;
 - ESHS metrics in regular progress reports.

For the purposes of implementation of this ESMF, potential health and safety impacts associated with the project have been identified, and mitigation measures have been recommended in the subsequent sections based on the national legislation, the World Bank Group ESH Guidelines, and the recently approved ESHS provided by the World Bank.

The table below summarize the main differences and similarities between Mozambican legislation and the World Bank's Safeguards Policies, especially in relation to the environmental assessment process, involuntary resettlement, health and safety, and waste management.

TABLE 5: MAIN DIFFERENCES AND SIMILARITIES BETWEEN MOZAMBICAN LEGISLATION AND THE WORLD BANK'S SAFEGUARDS POLICIES

Issue	Mozambique Legislation	WB safeguard Requirements	Gaps/Differences/Similarities
Project categorization	<p>The EIA is required by the Environment Law N° 20/97 of October 7, and Decree N° 54/2015 of December 31, defines the procedures for the development of an EIA. The EIA decree classifies the projects into 4 categories: Categories A+ and A where a full ESIA is required subject to review by independent reviewers; Category B where a full ESIA is not required, but a simplified environmental assessment (EAS); and Category C, which does not require any assessment, being necessary only the Good Environmental Management Practices which need to be approved by MITADER before an Environmental License is issued.</p> <p>For all categories, with the exception of category</p>	<p>Under OP/BP 4.01, a full ESIA is required for all projects screened as Category A. For Category B projects, an environmental assessment is required, usually less rigorous than a full ESIA and often taking the form of an Environmental and Social Management Plan (EMP). Beyond screening, no further ESMF/ESIA or ESMP or RPF/RAP action is required for a Category "C" project and a project is classified as Category FI if it involves investment of Bank funds through a financial intermediary.</p>	<p>There are slight differences between the requirements of Mozambican legislation and World Bank policies in relation to categorization, which will require a detailed analysis of the sub-projects to be financed by the project.</p>

Issue	Mozambique Legislation	WB safeguard Requirements	Gaps/Differences/ Similarities
	C, a public consultation is mandatory.		
Environmental License must be provided by MITADER prior to project appraisal/implementation.	The issuing of an environmental license shall precede any other required license.	OP/BP 4.01 requires the approval and disclosure of ESIA by the relevant government authority prior to project appraisal/implementation.	In both processes, the disclosure takes place before approval and therefore any raised concern is dealt with before project approval.
Guidelines and standards for Occupational Health and Safety (OHS).	Mozambican legislation on occupational health and safety combines provisions of different legal instruments such as the Labor Law (Law no. 23/2007 of August 1 st); Regulation of Environmental Quality and Effluent Emission (Decree n° 18/2004 of 2 of June).	The guidelines for OHS provided under the WB Occupational, Health, and Safety Guidelines should be applied for all subprojects to be financed under the WASIS II project.	Mozambique has not yet prepared specific standards for management of noise emissions for different industries. Therefore, World Bank standards (IFC OHS guidelines and IFC Environmental, Health and Safety guidelines) shall be applied.
Wastewater management.	The wastewater management standards in Mozambique are provided for in the Regulation on Environmental Quality Standards and Emission of Pollutants (Decree no. 18/2004, of June 2), and the Regulation of Public Systems for Water Distribution and Wastewater Drainage (Decree-Law no. 30/2003 of 1 July) which establishes standards for parameters associated with uses and emissions and discharge. The main	The following guidelines are considered in WB financed projects: IFC General Environmental, Health, and Safety (EHS) Guidelines; IFC, Environmental, Health, and Safety Guidelines - Water And Sanitation; and IFC, Pollution Prevention and Abatement Handbook.	Both national legislation and WB standards are relevant and should be applied in the implementation of the project activities.

Issue	Mozambique Legislation	WB safeguard Requirements	Gaps/Differences/Similarities
	<p>objective of this decree is the protection of the environment from urban and industrial waste water discharges, through the establishment of criteria for collection, treatment and discharge of wastewater.</p>		

8 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

It is expected that potential negative environmental and social impacts associated with the proposed WASIS II Project will be of localized and short-term nature and can be significantly minimized through adequate planning and thorough implementation of the Environmental and Social Management Plans by the Contractors responsible for conducting the construction/rehabilitation works, which are envisaged in Components 1 and 2 of the Project.

Any construction activities related to the building or rehabilitation of facilities for the improvement of water systems in cities may result in negative environmental and social effects (e.g. soils disturbances through excavations leading to soil erosion and compaction, land uptake resulting in conflicting land uses, soils and groundwater contamination by chemicals, etc.). Most direct impacts will be related to vegetation clearance and soil disturbances associated with the installation infrastructure, especially in cases where new infrastructure is necessary rather than a simple rehabilitation of the existing ones.

With regards to rehabilitation of existing infrastructures and installation of pipelines, potential negative impacts are likely to be related to contamination of air and water sources which may pose impacts on the natural environment as well as human health. Other socioeconomic impacts would be related to labour influx and the potential for increased in cases of gender-based violence, increase in crime and potential spread of communicable diseases including HIV and AIDS.

Considering that the main activities of the proposed program will be conducted in urban areas/cities, some of the indirect impacts will be related to public nuisance, which may include disruptions of public access, disruption of traffic, noise and dust emission, water shortages, public safety issues in excavated areas, disruption of access to public and private property including residential and commercial areas located in the proximity of the sites.

8.1 Negative Impacts

In general, it is expected that negative environmental impacts will involve temporary disturbances in smaller areas and with limited permanent effects that can effectively be mitigated through the implementation of an ESMP at project level.

Negative impacts identified for the construction phase vary between low to moderate, mostly to do with the physical environment. All potential biological impacts are low, except for the loss of vegetation cover and plant diversity which are considered to be of high importance, although decreasing to moderate following implementation of mitigation measures. Most of the impacts can be mitigated to the greatest extent possible and will last only during the construction period.

The socioeconomic negative impacts identified are mostly low or insignificant and can be reduced significantly after implementation of the proposed mitigation measures. The impacts will arise during construction phase. Assets will be impacted, business will be interrupted, and some physical relocation actions will be necessary.

The main impacts related to health and safety during the pre-construction phase are mostly related to the design of buildings such as administration buildings, storage building, and workshops,

amongst others. It is therefore necessary that the following safety measures be taken into consideration: availability of fire extinguishers and/or fire alarm systems and appropriate storage areas for chemicals and hazardous or flammable materials to reduce risks. Local inhabitants and workers should be informed of the safety measures, and signals should be placed close to potential areas of danger. The key impacts likely to result from the proposed activities are summarized as follows:

Direct impacts of the construction phase:

- Contamination of soils, ground and surface water as a result of chemicals (oils, fuels and lubricants from machinery and vehicles working on site, remains of paints, etc.) particularly on sites located near waterways – can be minimized through adoption of an ESMP that details suitable mitigation and management measures to be implemented;
- Air and noise quality may be affected as a result of construction activities – these can be mitigated by following existing Regulations and measures stipulated in the ESMP;
- Public nuisance and health impacts resulting from inadequate disposal of solid wastes including demolition materials containing asbestos from degraded roofs or pipelines. It is normally recommended not to remove the old asbestos pipelines from the ground as their handling during disposal is more hazardous than leaving them in the ground;
- Increased risk of work-related accidents as a result of lack of use of Personal Protective Equipment (PPE) by workers during the construction phase. Regarding health and safety aspects, the Project can be implemented without any significant risks and impacts, provided that the Health and Safety requirements stipulated are put in place and correctly observed/implemented;
- For the construction works, it is highly recommended to hire local workers wherever possible. This will raise the acceptance of the population to the project even if they do not benefit directly from the expanded drinking water supply and will help to improve livelihoods in the region;
- Dust emission, noise and vibration likely to affect communities in the vicinities of the project;
- Disruption of access roads as a result of construction of water distribution reticulation systems within the Nacala City;
- Water shortages in some areas during the rehabilitation or installation of new pipes, or other construction/ civil works;
- Spread of HIV/AIDS during the construction phase of administrative infrastructure may perpetuate poverty in the districts through impacting on the most economically-productive members of society who are active in the fight against poverty – This can be mitigated through the successful implementation of safety precautions and measures in the ESMP.

Indirect impacts during and after construction works:

- The contractor should establish all the necessary means for waste water and solid waste collection, which should be available during and after the construction phase. This is to

ensure that the water in the areas that benefitted from the project is not contaminated and does not expose risks to the health of the local inhabitants;

- It is anticipated that indirect impacts will be related to public nuisance and these will include disruption of public access, disruption of traffic (including pedestrians), noise and dust emissions, public safety issues in excavated areas, disruption of access to public and private property including residential and commercial areas located in the proximity of the sites.
- Social conflicts resulting from land uptake as may be required for the foreseen water supply civil works in the project areas, causing negative impacts on the poor, especially households headed by single women and/ or children.
- Differences in the visual appearance of the area (as a result of the construction of new infrastructures such water treatment plants, water storage tanks, among others).
- Noise and dust emissions which may lead to impacts on human health particularly in the communities living in the proximities of the projects;
- Disruption of public access affecting pedestrian and traffic during the construction activities particularly in the towns, and in sensitive locations such as schools, markets and health facilities;
- Poor sanitation in construction areas which can be mitigated/ avoided with the provision of adequate washing and toilet facilities close to the works.
- Involuntary resettlements resulting from the construction of new infrastructure which may affect particularly single women and households headed by children especially in peri-urban areas;
- The need for continual management of sludge associated to water treatment process. Treatment and deposition of such sludge in inert landfill required, to minimize potential for groundwater contamination.

Cumulative impacts during and after construction works:

Cumulative impacts likely to generate negative and positive on the natural and social environments include the following:

- Sedimentation of waterways and areas around artisanal boreholes where loads of sediments are dragged to waterways as runoff. Soil disturbances as a result of agricultural activities upstream are likely to contribute sediments to rivers. The nature of these types of cumulative impacts would be temporary, occurring during the construction phase or indefinitely in the artisanal boreholes and can be mitigated by ensuring that no sediments are added to the waterways/boreholes;
- The development or upgrade of water supply systems is likely to lead to undue pressure on water catchments in the project areas although given the status of water resources in Mozambique in general, this type of impact may be negligible;
- The effect of climate change on water resources although already evident in a regional context may combine with other pressures to impact negatively on the status of water resources which the water supply schemes depend on;
- The proposed construction and upgrade of water supply schemes will cumulatively generate positive impacts and result in anticipated increases of income generation activities, and generally improving the welfare of local people and children who may be able to afford quality education and health services. These impacts may trigger other improvements in

the communities and villages such as better sanitation, improved nutrition and general improvement of the standards of living of the beneficiary communities;

- The Nacala Water Supply System in particular will contribute in both environmental and social impacts from other projects including the road works R702 road between N12 Junction and Nacala-a-Velha, specifically on the issue of dust emission, loss of crops for the two projects, soil erosion, labour influx and potential for increased gender-based violence.

8.2 Positive impacts

In general, positive impacts are expected to result from the construction and operation of the planned infrastructures. Employment will be generated during construction and operation phases and will contribute to generation of income for families working in the projects. Such families may use the income to improve their living conditions including investing in education for children. Availability of potable water will also lead to the improvement of living conditions of the people living in the beneficiary cities, where incidence of waterborne diseases such as bilharzia, cholera and diarrhoea diseases will be minimized. Women and children will also spend less time searching for water and they may use the extra time to invest in human development activities, including education or income generating activities.

8.3 Summary of Environmental and Social Impacts and Respective Mitigation Measures

The Table below summarises key environmental and social impacts as well as respective mitigation measures to eliminate or minimize such environmental and social risks. It should be noted that specific projects under the WASIS II AF will have specific Environmental and Social Impact Assessment and Environmental and Social Management Plans to be used by contractors to prepare their own Contractors' Environmental and Social Management Plans. Consultants preparing the ESIA reports shall, among other guidelines and Best Practices, take into account the World Bank Environmental, Health and Safety Guidelines on Water and Sanitation that can be found on the following site:

<https://www.ifc.org/wps/wcm/connect/e22c050048855ae0875cd76a6515bb18/Final%2B-%2BWater%2Band%2BSanitation.pdf?MOD=AJPERES>

Potential Impacts of the Project and Mitigation Measures

Potential Negative Impacts		Mitigation Measures
Quality of water	<p>During all types of construction and rehabilitation works, residual waters, chemicals and oils are discharged. These have the potential of adversely affecting underground water and soils in the areas where the project is implemented.</p> <ul style="list-style-type: none"> ▪ Pollution of underground water ▪ Variations in water levels ▪ Pollution resultant from the lack of effective management in the water catchment areas ▪ Salt Intrusion 	<p>During construction works:</p> <p>Measures include: proper storage of hazardous chemical products at the Project sites. Other measures include adequate drainage of water and/or other liquid wastes used during construction and operation phases of the Project.</p> <p>All products used during the Project should be nontoxic and biodegradable.</p> <p>The use of chemical products such as oils, lubricants and fuels should be limited and controlled/ supervised.</p> <p>Drainage systems in the Project sites should be equipped with a water/ oil separator.</p> <p>During construction and rehabilitation works, superior soils should be separated/ removed and replaced/ placed back once the works have been concluded.</p>
Vegetation and Soils	Vegetation clearance and soil disturbances	Reinstatement of vegetation cleared following completion of works; rehabilitation of site's disturbed soils immediately after completion of works
Water shortages	<p>Resulting from construction work</p> <p>Contamination of water/ reduced quantities of water</p>	

	during replacement or construction of pipelines	
Air pollution	Dust/ toxic chemicals in the air	<p>Mitigation measures watering surfaces to reduce dust and reduce usage of chemicals (toxic)</p> <p>Reduction of wind speed with the use of wind breaks and covering dirt roads with tar</p> <p>Some low-cost mitigation measures include:</p> <ul style="list-style-type: none"> ▪ Adequate preparation of construction material such as cement ▪ Reduction of speed limits and/ or access to roads that lead to the project areas ▪ Ensure regular maintenance of vehicles and equipment used on sites ▪ Avoid fires
Land conflict/ disputes	Disputes around land use rights/ titles	<p>Public consultations prior to any works/ during project preparation and throughout all phases of the Project according to the provisions of Decree 54/2015 of December 31 and Ministerial Diploma 130/2006 of July 19 on the public consultation process, which should involve interested and affected people, directly or indirectly affected by the activities of the Project.</p> <p>If resettlement is unavoidable, the resettlement process has to be managed in accordance to the Resettlement Decree n° 31/2012 of August 8, and should also be in conformity with the World Bank Safeguard Policy on Involuntary Resettlement OP/BP 4.12.</p>
Social conflicts	Potential for social conflicts between workers (from other areas) at site and members of local community	Ensure that the proposed construction/rehabilitation works are carried out by members of the community residing in the district, and priority be given to local construction firms with knowledge of the local social norms
Noise and vibrations	Noise and vibrations are common during construction	Mitigation measures include:

	and rehabilitation works, and these can be exceeded	<p>Choosing less noisy equipment and make use of equipment in good conditions</p> <p>Usage of silencers to reduce vibrations of equipment during construction phases</p> <p>Where necessary, reduce construction time and the running speed of noisy equipment</p> <p>Planning and logistics should be appropriate – plan noisy activities for early hours of the day and inform local inhabitants of activities that will result in noise and vibrations</p> <p>Monitor noise and vibrations</p>
Water treatment	Liquid and solid waste will be produced during the construction and rehabilitation phases of the project.	<p>Solid and liquid waste should be managed adequately to reduce adverse impacts on water and soils and to ensure safety in the Project area</p> <p>Hazardous/ toxic waste should be disposed-of correctly</p> <p>The contractor should categorise all waste, and should adopt the practice of recycling whenever possible</p>
Health of population in Project areas	Water borne illnesses resultant from still waters/ water treatment waste	<p>If water/ oil leaks are constant, separators should be installed and cleaned regularly</p> <p>Solid waste should be covered to avoid contamination of water</p> <p>Guidelines and procedures on cleaning oil/ fuel/ chemical leaks should be made available</p> <p>Water leaks if unattended in the distribution systems can create permanent wet conditions, leading to the proliferation of mosquitoes in the beneficiary communities. FIPAG shall ensure that community sensitization is carried out on management of tap water in households. Regular monitoring and</p>

		maintenance of water distribution network is also required for early identification of leaks and repairs.
Water reservoirs	Changes in the physical / visual appearance of areas of the Project	Make sure that reservoirs are built or constructed in areas that are not prone to erosion or where they will not cause visual intrusions or disturbances. .
Soil erosion	<p>Increase in soil erosion and potential for landslides may occur;</p> <p>Soil erosion may as a result of the expansion of water distribution networks for urban areas</p>	<p>Implement appropriate soil erosion control measures such as minimising run-off, building terraces and diversions, etc.</p> <p>Combine civil construction, tree-planting and small earth movements to help stabilize soils,</p> <p>Establish protection zones in unoccupied areas or areas that become unoccupied when households are moved/ resettled;</p> <p>Mining of construction materials in borrow pits to be preceded by appropriate mining plan which identifies measures for site decommissioning and restoration plan</p>
Climate change effects	Effects of climate change in the sustainability of agricultural systems, water supply and ecosystems management in districts	The District Environmental Commission shall identify and asses potential risks likely to result from extreme whether events such as flooding, droughts and their likely impacts on the district infrastructure and sustainable livelihoods, and take these into account during the planning and implementation of the small scale civil works in the districts.
Ecological Flow reduction at the Nacala Dam	Abstraction of water from the Nacala Lam may lead to reduction of the ecological flow downstream the Nacala Dam, affecting ecosystems as well as water shortages for communities living downstream of the Nacala Dam	The Nacala Water System shall set ecological flow requirements and monitor to ensure that water supply for the Cacala City does not eliminate water flow downstream of the Nacala Dam.

<p>Health and Safety</p>	<p>Incidents and accidents are bound to occur in the workplace</p>	<p>Health and safety measures in the workplace should include:</p> <ul style="list-style-type: none"> ▪ Restrict access to construction sites and protect surroundings of project area ▪ Make provisions for security guards at entrances and exits of construction sites ▪ Ensure that workers know how to swim – where construction sites are close to water ▪ Make provisions for proper training on the use of equipment as well as training on health and safety procedures in the workplace to workers and provide safety equipment to workers (such as helmets, gloves, goggles, boots) etc ▪ Prepare and emergency response plan ▪ Make provisions for a health unit and first aid for small works, for larger works arrangements for the use of ambulances and local medical facilities should be made, as required by the World Bank standard contracts: <i>In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor’s and Employer’s Personnel. The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility and shall have the authority to issue instruction”.</i> ▪ Ensure that sufficient lighting is available for night works ▪ Establish speed limits at site areas to avoid accidents ▪ Distribute mosquito nets to project workers who remain on-site ▪ Liquid and solid waste should be disposed off-site ▪ Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored
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		<ul style="list-style-type: none"> ▪ Make provisions for access to potable water and washrooms during works and of water, sanitation and hygiene (WASH) programmes directed towards the local population of the areas covered by the project <p>The WHO as well as the IFC Performance Standard 4 recommendations for health (in the case of the former), safety and security (in the case of the latter) in the workplace should be followed.</p>
Disruption of Access Roads in the Nacala City	Access Roads may be affected during the Construction of Water Distribution System	<ul style="list-style-type: none"> ▪ The Contractors shall prepare clear method statements for the construction of water distribution systems in Nacala City; ▪ FIPAG and Nacala Municipality shall ensure that the public is informed about any access roads disruption during the carrying out of water distribution construction works; ▪ The Contractor shall include budget for reinstatement of disrupted roads subsequent to completion of construction works; ▪ Access restrictions shall be enforced in all disrupted access roads, and alternative routes clearly indicated and communicated to road users.
Impacts on physical cultural resources	Excavations during installation of water transmission mains may affect physical/cultural resources	<ul style="list-style-type: none"> ▪ The Contractors must be instructed to observe and ensure that physical and cultural resources of individual, local, district, provincial or national level are preserved. Specific requirements should be detailed in the EIAs indicating procedures to communicate any chance finding.
Socio-economic	Potential loss of land, interruptions in income generating activities	<ul style="list-style-type: none"> ▪ Specific project areas or areas of work should be identified and chosen in a consultative and participative manner to avoid disturbances and negative social implications; ▪ Where possible, labour from local inhabitants of the project areas should be used to avoid/ reduce social conflict; ▪ Education and sensitization on the prevention against HIV/AIDS should be organized. Condoms should be distributed to workers, and health care should for workers should be made available ▪ Respect for local cultural habits and for religious and cultural areas.

<p>Lack of adequate Waste Management</p>	<p>Increased pollution in the area and deterioration of environmental and health quality</p>	<ul style="list-style-type: none"> ▪ Have in place adequate procedures for management of waste resulting from the construction activities (demolition waste, used filters, oils and lubricants from workshop areas, domestic waste and construction waste. ▪ Ensure adequate management of sludge resulting from the water treatment process at the water treatment plant. Sludge should be adequately stored and treated prior to deposition in the inert landfill.
<p>Lack of coordination amongst local structures/ services providers</p>	<p>Damage to TDM optic cables</p> <p>Damage to paved road</p> <p>Destruction of electrical cables</p> <p>Investing in low density area, and not covering areas with greatest need</p>	<ul style="list-style-type: none"> ▪ Joint planning, early identification and opening (if required) of these services to prevent damage during construction, and coordination with local structures, Municipality and other service providers on location/ dates/ duration and extent of works to avoid increase in costs and investments with no direct benefits to urban population.

9 ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR ACTIVITIES UNDER WASIS II ADDITIONAL FINANCING

The project of upgrading and expansion of the water supply systems to the city of Nacala is initially proposed by FIPAG to be funded under the Millennium Challenge Account-Mozambique (MCA-Mozambique) projects in 2008-2012. MCA-Mozambique was a public institution created by the Government of Mozambique to implement the "Compact", subsequent to signing a financial cooperation agreement between the Government of Mozambique and the United States Government, represented by the Millennium Challenge Corporation (MCC) whose areas of intervention included, among others, investment in the water sector. In this regard, an Environmental and Social Impact Assessment (ESIA) was conducted for the Water Supply and Sanitation project, in line with MCC Guidelines (IFC and World Bank Guidelines) as well as the Mozambican Environmental Law as stipulated by Decree 45/2004 of September 29.

FIPAG has recently commissioned a review of the existing ESIA study, with a view to update the description of the environmental and social impacts, both positive and negative, that are likely to result from the proposed activities under WASIS II Additional Financing. Specific issues to be addressed will include any consideration of the new Mozambican Environmental Legislation as specified under decree 54/2015 of December 31, as well as assessment of impacts likely to result from the demolition of unfinished infrastructures (foundations built with MCA funding to construct the water treatment plant), disposal of stockpiles of pipes if found to be unusable by inspection works, and ecological aspects of the aquatic environment created by the Nacala dam expansion in relation to continuous water abstraction to supply Nacala Porto City.

In summary, the Consultant is validating all concerns identified and differentiate between short, medium, long-term and cumulative impacts during construction, operation and decommissioning. The consultant shall also identify both temporary and permanent impacts. A detailed outline and discussion of specific conditions that might affect the environment which are unique to the type of facility and/or operation being implemented should be provided.

10 SCREENING PROCESS

10.1 Summary

The screening process described in this section is aimed at determining which activities (construction/rehabilitation works) are likely to result in significant negative environmental and social effects with a view to determine appropriate impact mitigation measures for those activities and ensure environmental sustainability of sub-projects undertaken in the Project areas, through effective monitoring of impacts during the construction/rehabilitation phase of works in the cities. The outcome of the screening process will determine the extent of environmental considerations required preceding the carrying out of activities of the Project related to construction and rehabilitation works.

For the purpose of the construction/rehabilitation of civil works, the MITADER Environmental Screening Form (Appendix 2) has been considered. However, the form does not fully address some of the key environmental and social effects likely to result from the proposed activities. Thus, an Environmental and Social Screening Form (Appendix 3) has been devised to support environmental and social decision-making of the proposed works.

The form is also designed to be used by the persons involved in the implementation of the program, reviewers and relevant decision makers, in order to identify mitigation measures for the activities likely to have adverse environmental and social effects and identify the need for advanced environmental assessment.

The Form covers information which will help reviewers describe the bio-physical aspects and social conditions of the proposed sites for installation of the infrastructure, in order to identify the potential impacts of the activity on the environment and on the social settings, and to identify the need for mitigation, resettlement or compensation measures.

Step 1: Site Screening

The District Environmental Commission will conduct a desktop study aimed at appraising the project's plans and activities. The officer will be trained by the provincial directorate of land, environmental and rural development on identification of basic environmental and social issues associated with development projects. The Commission shall work in coordination with the representatives of the MOPRH and FIPAG to determine the likelihood of the project to cause negative environmental and social impacts. Where relevant, the officer, together with other members of the team shall conduct a site visit with a view to verify the site conditions and hence determine what the potential environmental and social impacts associated with the projects are.

Subsequent to the site visit, the District Environmental Commission will complete the Environmental and Social Checklist presented in Appendix 4, in order to identify the potential environmental and social effects, determine their significance, categorize the activity and propose appropriate environmental and social impact assessment (ESIA) by assigning the appropriate Category (A+, A, B or C). Category A+ subprojects are not eligible.

Step 2: Environmental Categories of the Activities

The criterion for categorization of the proposed rehabilitation/construction works for this ESMF is based on the World Bank's OP 4.01 for Environmental Assessment which is in many ways similar to the Mozambican EIA regulations as per the Decree 54/2015 of December 31. Categorization will be preceded by filling the Environmental and Social Screening Form and Checklist (Appendix 3 and 4) and the information gathered in this form will be used to assign appropriate environmental category A, B or C as described below. Environmental categorization of activities will be carried by the District Environmental Commission in consideration of the criteria below.

TABLE 6: CRITERIA FOR ENVIRONMENTAL CATEGORIZATION OF THE PROPOSED ACTIVITIES

<p>As per the Article 9 of the EIA Decree Nr. 54/2015 of December 31, the assessment criteria's are as follow:</p> <ul style="list-style-type: none">• Number of people and communities covered by the proposed project;• Ecosystems, plants and animals likely to be affected, and their importance for biodiversity and ecosystem services;• Location and extent of potentially affected area;• Reversibility of potential impacts;• Characteristics of the elements of the proposed project. <p>From the above criteria, the environmental authority (MITADER/DPTADER) undertake the pre-assessment and categorization.</p> <p>Category A+: activities requiring an Environmental and Social Impact Assessment and review by independent reviewers/experts;</p> <p>Category A: activities requiring an Environmental and Social Impact Assessment less rigorous than the category A+;</p> <p>Category B: activities requiring a simplified Environmental Impact Assessment (ESIA) or/and an Environmental and Social Management Plan (ESMP);</p> <p>Category C: activities that are exempt from detailed environmental impact assessment, but which shall be implemented in observance of environmental management best practices.</p>

Given the nature of the foreseen works, it is anticipated that most activities will fall under Categories B and C, given that the potential environmental and social impacts are site-specific, minimal, and which can be easily mitigated through a simple environmental and social management plan (for category B activities) and environmental management best practices for category C projects.

FIPAG will be required to fill the environmental and social screening forms of the proposed construction/rehabilitation works, propose adequate environmental classification of the activities, and communicate the results of the screening to MITADER at the Provincial Directorate of Land, Environment and Rural Development (DPTADER) for decision-making.

Step 3: Carrying out Environmental Work

Following the analysis of the screening form and the categorization of the activity, and the determination of the level of environmental work required, the district environmental officer will make a recommendation on whether:

- a) The Environmental and Social Impact Assessment (ESIA) is necessary;
- b) A simple Environmental and Social Management Plan is required; or
- c) The project is exempted from environmental impact assessment, but its implementation must be based on environmental management best practices.

The environmental Officer recommendations must always be validated by MITADER/DPTADER.

As per the proposed screening process, the following environmental work can be conducted:

(a) Use of the environmental and social checklist (Appendix 4): The environmental and social checklist will be filled by the district environmental officer. This activity will take place in parallel to the preparation of plans and drawings of the proposed construction/rehabilitation works under WASIS II.

Category B activities require a simplified environmental assessment and ESMP. Where the checklist identifies the need for land acquisition, a Resettlement Action Plan would be prepared by qualified personnel in line with the OP 4.12 for Involuntary Resettlements and taking into account the Ministry Diploma 181/2010 of November 3 which outlines asset compensation methodology for involuntary resettlements.

(b) Requirements for Environmental and Social Impact Assessment: In case the results of the environmental and social screening process indicates the need for environmental and social impact assessment as a result of the complexity of the proposed construction/rehabilitation activities of WASIS, an ESIA will be carried out by an authorized consultancy firm, in line with the Decree 54/2015 of December 31 on Environmental Impact Assessment Processes administered by MITADER, and in consideration of the Bank's OP 4.01 for Environmental Assessments.

Step 4: Review and Approval

The environmental and social screening forms as well as the ESIA reports will be submitted to MITADER at provincial level (DPTADER) for review and decision-making. In summary, DPTADER will be responsible for the following:

- Review of the results and recommendations submitted by the district environmental officer based on the environmental and social screening form (Appendix 3);
- Review of the proposed mitigation measures presented in the Environmental Checklist (Appendix 4);
- Review the results of the conducted ESIA's and ESMP's to determine whether the relevant environmental and social issues have been properly addressed, and relevant mitigation measures have been put in place for the proposed civil works.

The Technical Review Committee of DPTADER will make recommendations for approval to the DPTADER Director in consideration of the results of the review process.

In the case of approval of an ESIA Report, an Environmental License will be issued in conformity with the requirements of the Decree 54/2015 of December 31 on Environmental Impact Assessment Process, which also requires MITADER (through DPTADER) to explicitly state how the findings of the ESIA Report were used to make the final decision.

Once the ESIA report is approved by DPTADER, the district and FIPAG environmental officer will be informed (in writing) and an environmental license is issued against the payment of a specific license fee, and then the construction/rehabilitation works can begin.

Step 5: Public Consultations and Disclosure

As per the EIA Regulations for Environmental Impact Assessment Process (Decree 54/2015) and the Ministerial Diploma 130/2006, public consultation is an integral part of the ESIA activities and should be considered during scoping phase throughout the preparation of the ESIA, in collaboration with relevant bodies and the Project Affected Persons (PAPs) and may include:

- Conducting one or more public (members of the community, government and non-government entities and other stakeholders) meetings with a view to present the proposed activities, and gather public views, concerns and expectations regarding the proposed project;
- Register all the issues raised and ensure that communication channels between the public and the project team are established with a view to gather public perception regarding the proposed project.

Public meetings must be preceded by a public announcement which clearly states where the meetings will be held, the date, and such notice must be publicized through the most circulated newspaper or the most used communication channel (e.g. radio, TV, newspaper) 15 days before the meeting date. In certain cases, members of the public may require baseline information to gain an understanding of the project prior to the meeting date, to allow them to participate actively during the public meetings.

Public consultation should contribute to the elaboration of the scoping report by identifying the key issues which should be addressed in detail during the environmental assessment of the project's activities. The results of consultations should be included into the EIA Report and it should be explicitly stated how these results have been used in the scoping report and in making the final decision of the ESIA Report.

All relevant information necessary for the consultation should be provided to the public timely, prior to the consultation, and must be in a form and language understandable and accessible to the groups to be consulted. In terms of disclosure of information, all reports related to the consultation process, the environmental assessment and/or the ESIA and ESMP reports should be made available in a public place accessible to the affected and interested groups included non-governmental organizations. These reports should also be formally submitted to the World Bank in-country and subsequently the Bank makes them available in the Bank Website. Disclosure process for ESIA and ESMP should follow the same approach as proposed in chapter 6 of the present ESMF.

For the purpose of the civil works in the cities proposed for WASIS II, it is proposed that the consultation with public be carried out in the following two phases:

- During the completion of the environmental and social screening forms and the respective categorization of the activity
- During the detailed evaluation of environmental and social impacts.

MITADER (through DPTADER) may also provide copies of the completed EIA Reports to the public for review and comments prior to issuing of the final decision. MITADER (through DPTADER) will also involve other relevant bodies (provincial directorates of different line ministries, the district and the municipal governments, education and research institutions, NGOs, local associations etc.).

Step 6: Environmental monitoring and follow up

The Environmental Monitoring intends to verify how effective and relevant the proposed mitigation measures are and ensure their updating where relevant for continual improvement. For the purpose of the WASIS II monitoring will be carried out by the FIPAG, Public Works and DPTADER appointed persons.

10.2 Responsibilities for the implementation of the screening process

Table below summarizes the key stages as well as the relevant institutional arrangements to carry out the screening process, preparation and evaluation of the proposed activities and the final decision making, to allow the initiation of works.

TABLE 7: RESPONSIBILITIES FOR IMPLEMENTATION OF THE PROPOSED SCREENING PROCESS

Screening phase	Responsibility
Environmental and social impact of the construction and rehabilitation works of WASIS II using the devised Form (Appendix 3)	Environmental Specialist
Environmental Categorization of the activities (categories A, B, or C)	MITADER/DPTADER and Environmental Specialist
Carrying out Environmental Work: i.e. implementing simple mitigation measures (Table on section 7.5), or, carrying out a separate EIA	
Review and Approval	The DPTADER Environmental Technical Review Committee will review the recommendations made by the District Environmental Commission and issue its recommendation to DPTADER for final decision making.
Approval of (i) the screening results; (ii) the assigned environmental category; and (iii) recommendations to FIPAG	MITADER (DPTADER)

<p>Selection of the consultant in case of the need for a separate ESIA</p>	<p>FIPAG will draft the ESIA ToRs, and prepare criteria for hiring an authorized ESIA Consultant, evaluate proposed candidatures, and select the most qualified consultant and submit the selected Consultant to the specific sector. Should the procurement be carried out through World Bank funds, appointments will be based on both quality (70%) and Cost (30%).</p> <p>The Proponent will make decision on the selection of the ESIA Consultant, draft and award a Contract for the ESIA Consultant.</p>
<p>Carrying out the Environmental and Social Impact Assessment (ESIA)</p>	<p>Authorized ESIA Consultant</p>
<p>Approval of environmental assessment</p>	<p>MITADER (DPTADER)</p>
<p>Public Consultation and Disclosure</p>	<p>FIPAG will ensure that the results of the screening process and the ESIA Reports are communicated to the public and made available to stakeholders including PAPs.</p>
<p>Monitoring</p>	<p>Category C activities: FIPAG will oversee the implementation of environmental management best practices under Category C.</p> <p>Category B activities: DPTADER</p> <p>The Generic EMP foresees the position of Environmental Control Officer (ECO) who shall be appointed by the Project Supervisor to monitor, review and verify the implementation of the ESMP (by the Contractor). However, in the case of this Project, this position is not warranted in terms of the potential negative environmental impacts of the Project.</p> <p>However, it is recommended that the responsibility for environmental compliance monitoring is vested in the Resident Engineer who shall be audited by the Environmental Engineer of FIPAG. The Resident Engineer may seek advice on environmental matters or delegate part of his environmental responsibilities to the Consultant.</p>

11 ASSESSMENT OF THE INSTITUTIONAL CAPACITY OF FIPAG

Over the years FIPAG has developed experience with integrating environmental and social aspects within water supply projects in line with the World Bank safeguard policies. Continues expansion of FIPAG's activities including WAISIS II-AF activities result in the need for additional staff so that there is an environmental and social safeguard specialist in each operational area of the regions covered by WASIS II. FIPAG should, in addition, invest in building skills of environmental and social specialists to bring them up to date with contemporary World Bank's requirements such as issues related to labour influx, the Code of Conduct and gender-based violence and child violence in project areas, and other health and safety issues likely to affect communities living in vicinities of FIPAG's projects.

Although FIPAG's Environmental and Social Specialists have experience with implementing Environmental and Social Management Plans as well as health and Safety Plans, there is a need to ensure that Safeguard Specialist review the environmental and social language going into Requests for Proposals (RFPs), as well as the contract documents to ensure that the Contractors and supervision teams are well informed about their responsibilities. The safeguard specialists also need to ensure that the Contractors and supervision teams are informed about the need to consistently implement environmental and safeguard procedures throughout the implementation of the projects and ensure adequate filing of evidences reporting.

In summary, in order for FIPAG to be able to improve environmental and social management performance in a continually expanding activities, FIPAG must build skills of specialists to better address potential negative environmental and social impacts and mitigate them; undertake the necessary steps to screen process and activities, effectively monitor the implementation of the project, in particular the environmental management and the resettlement action plans, audit and reporting. Trained human resources need to be available to undertake this work, and as needed, technical assistance should be provided by the World Bank, or through independent Consultants.

11.1 Capacity to Implement and Manage WASIS II Safeguards

FIPAGs organizational chart was approved by the Ministerial Diploma number of 188/2013 of the Ministry of Public Works and Housing.

In terms of institutional organization, FIPAG is headquartered in Maputo, and has delegations representing it across the country. The establishment of FIPAG in municipal cities suggests water supply-related work should be carried out through strict cooperation and collaboration with the Municipalities.

FIPAG has three delegations across the country, one in the southern region, located in Xai-Xai; the second is located in the central region, in Beira; and the third is located in the northern region, in Nampula. In terms of the management of the recommendations of the present document, the lack of sufficient human resources in all targeted areas is of concern. The Supervising Consultants Team, through the Environmental Control Officer, with assistance from the FIPAG headquarters Environmental staff are therefore required to assure effective management and monitoring of environmental and social issues during the implementation of the project.

11.2 Staffing and Training Recommendations

Overall FIPAG have qualified personnel to lead with environmental and social issues, however the numbers are reduced, hence not sufficient to address the challenges that are imposed by the various projects being managed by them. The existing staff members include an Environmental Engineer assigned to the Project Implementation Office Area in the Greater Maputo; an Environmental Engineer assigned to the Central Services of Projects and Investments; and an Environmental Manager based in Maputo. For WASIS II activities and taking into consideration the activities to be implemented in Nacala, FIPAG should consider the provision of additional support, with a focus on specialized technicians mainly related to hygiene and security at workplace, as well as social components to support FIPAG delegations. This support should also be coupled with the provision of Environmental and Social Officers (ESOs) for the project areas, to progressively increase the human resources, starting with the appointment of 5 ESOs in regional delegations as follows:

- 1 in Beira to support implementation in Beira and Dondo;
- 1 in Manica to support Manica, Chimoio and Gondola; and
- 1 in Tete to support Tete, and Moatize;
- 1 in Pemba City;
- 1 in Nacala City.

Additionally, for major projects such as the proposed additional financing, dedicated Environmental and Social Officer should be provided with all working conditions including a vehicle, cell phone and office space to better support the implementation of the Environmental and Social Safeguards from earliest stage of the project construction.

The proposed Terms of Reference for FIPAG's Environmental and Social Officer can be seen in Appendix 5.

FIPAG's Regional Offices/ Delegations should manage the operational areas under their tutelage. The Environmental and Social Officers would also be based at these locations, to facilitate greater mobility, better assistance and download the inherent costs associated. The ESOs would therefore be under the management of the Regional Delegations.

Should there be a need for further support in terms of human resources for the management of environmental issues during the implementation of the project, it is recommended that FIPAG expands the allocation of Environmental and Social Officers to each city covered by the project gradually.

For trainings, it is recommended that FIPAG develop a training program and/ or a Capacity Development Plan. The training program should be designed to improve the effectiveness of the capacity of the local authorities in the management of environmental and social impacts during the planning, implementation and operation phases of the project in the selected cities, and should comprise of the following:

- Enhance knowledge of the technical staff in subjects related to environmental legislation in Mozambique;

- Improve the technical analysis of the screening and scoping processes of projects being proposed to take place in the districts and facilitate decision making regarding their environmental sustainability;
- Improve the technical analysis of the environmental impact assessment reports prepared by environmental consultants and contribute to better decision making on the quality of reports and the mitigation measures being proposed to minimize the potential environmental and social impacts; and
- Improve the technical capacity for monitoring the implementation of the environmental management plans as well as environmental audits
- Raise awareness of the participants on the relevance and the need for environmental management in the planning, implementation and operation of development projects.

The training should take place in two stages being **(1) Training of Trainers** – MITADER at national level conduct training to selected staff on the subjects outlined above, and **(2) Training of the provincial/ municipality staff** – The trained staff at national level will train the provincial/municipal staff who will be responsible for overseeing the integration of environmental and social aspects in all cycles of water supply projects in the cities.

The staff trained at provincial/municipality level should comprise all the key sectors such as the department of infrastructures and building, the agriculture sector, health, fisheries and industry and commerce amongst others.

Other recommended short training courses or learning platforms can involve either of the following areas which are of particular relevance to the project and country in general:

- Integrated Water Resources Management and Climate Change
- Sustainable Urban Development/ adapting cities to Climate Change
- Ecological Survey Techniques

And lastly, exchange visits and joint monitoring visits amongst officers from the project areas should be encouraged, particularly where there is evidence of good practices and success stories or where there are financial constraints for undertaken some of the above-recommended trainings.

11.3 World Bank Support

The World Bank Environmental Team in Mozambique is highly qualified and has been providing technical support to the FIPAG Environmental Team through trainings and workshops in the implementation of Environmental Safeguards in Water Supply Projects. In order to systematically build institutional capacity in environmental and social management, FIPAG should request support from the World Bank environmental team to help identify FIPAG’s training needs and prepare annual training plan, targeting FIPAG’s staff as well as other key government and municipal entities (MITADER, MOPRH, Municipalities) involved in the water supply projects decision making processes.

12 STAKEHOLDER ENGAGEMENT PROCEDURES

A Stakeholder Engagement Plan (SEP) should be developed to assist the FIPAG with managing and facilitating future engagement through the various stages of the WASIS II's life cycle. The SEP to be developed under the project should adopt an inclusive life-of-project perspective. This section provides the procedures to be integrated in the future SEP to guide the stakeholder engagement process during the Project implementation.

The SEP should seek to define a technically and culturally appropriate approach to consultation and disclosure. The goal of the SEP for the project should be to improve and facilitate decision making and create an atmosphere of understanding that actively involves project affected people and other stakeholders in a timely manner, and that these groups are provided sufficient opportunity to voice their opinions and concerns that may influence Project decisions. The SEP should be seen as a useful tool for managing communications between the FIPAG and its stakeholders.

The SEP of the project shall be designed to meet between others the following objectives:

- Incorporate the stakeholder engagement requirements of the Mozambique legislation;
- Provide guidance for stakeholder engagement such that it meets the standards of International Best Practice including those provided for in the WB Safeguards Policies;
- Identify key stakeholders that are affected, and/or able to influence the Project and its activities;
- Identify the most effective methods and structures through which to disseminate project information, and to ensure regular, accessible, transparent and appropriate consultation;
- Guide the FIPAG to build mutually respectful, beneficial and lasting relationships with stakeholders;
- Develops a stakeholder's engagement process that provides stakeholders with an opportunity to influence project planning and design;
- Define roles and responsibilities for the implementation of the SEP;
- Define reporting and monitoring measures to ensure the effectiveness of the SEP and periodical reviews of the SEP based on findings.

The SEP will be required to include specific considerations to be taken into account when planning for stakeholder engagement during the project implementation. Such considerations should include the following:

- No willing stakeholder should be excluded from the process of engagement. Some stakeholders will need to be sensitized about the concept of engagement itself, as well as on the complex issues requiring specialized and technical knowledge. These demands can increase the cost of consultation required to meet external expectations, and often this occurs at a time when a project lacks the internal capacity and resources to implement a broad engagement strategy;

- Stakeholders can have unrealistically high expectations of benefits that may accrue to them from the project. As such the FIPAG as well as contractors or service providers must be clear on what they can and cannot do;
- Cultural norms and values can prevent stakeholders from freely participating in meetings. Often there are conflicting demands within a community, and it can be challenging for the Project to identify stakeholders who are representative of common interests. This might be avoided by employing local community liaison officers who are sensitive to local power dynamics, which requires project proponents developing an awareness of the local context and implementing structures to support and foster effective stakeholder engagement.

Subprojects to be financed by the project will undertake environmental and social impact assessment (ESIA) as well as environmental and social management plans (ESMP) which should be subject to consultation process to be guided by the SEP in line with the ESIA regulation procedures. Stakeholder engagement within the ESIA/ESMP/RAP process is critical for supporting the project's risk management process, specifically the early identify and avoidance/management of potential impacts (negative and positive) and cost-effective subproject design.

The SEP shall define stakeholder engagement phases relevant to the ESIA/ESMP/RAP of the subproject in compliance with national public consultation regulation.

13 CHANCE FINDING PROCEDURES

A chance find is an archaeological material encountered unexpectedly during project construction or operation. A chance find procedure is a project-specific procedure, which will be followed if previously unknown cultural heritage is encountered during project activities. The chance finds procedure set out how chance finds associated with the project will be managed. The procedures include:

- requirements to notify relevant authorities of found objects or sites by cultural heritage experts;
- fence off the area of finds or sites to avoid further disturbance;
- conduct an assessment of found objects or sites by cultural heritage experts;
- identify and implement actions consistent with the requirements of national law and World Bank Safeguards Policy;
- and train project personnel and project workers on chance find procedures.

The national Law No 10/88 of December 22 (Cultural Protection Law) applies to cultural heritage assets held by the State, public entities or persons, without impairment to the property rights to respective holders. The Law also applies to all cultural assets that may be discovered in Mozambican, in the soil, subsoil, inland waterbeds and continental shelf. The Article 13 of the Law states that "any person who finds places, constructions, objects, or documents that may be classified as cultural heritage goods, shall communicate it to the nearest administrative authority".

14 FIPAG'S ENVIRONMENTAL AND SOCIAL MANAGEMENT – LESSONS LEARNED

14.1 Implementation of WASIS II ESMF

The Mozambique Water Services and Institutional Support Project II (WASIS II) was approved in 2016 and became effective 2017. The design of the WASIS II was to expand water service provision in targeted cities and support next phase policy reforms in the urban water sector. The five components of the project focused specifically on supporting water systems serving the cities of Pemba, Beira and Dondo, Tete and Moatize in the northern and central regions of the country, with most of the activities advancing satisfactorily.

In Pemba, all the development of the well fields has been completed and the construction of the transmission main has started. In addition, the design for the expansion of the water treatment plant was completed in December 2018. In Beira, the design of the water supply network for both Beira and Dondo cities is well advance with construction commenced in November 2018. Moreover, consultancy services for the design of the rehabilitation works for the water treatment plant have started. Once the designs of the treatment plants are completed in early 2019, tendering for these large water treatment infrastructures will be launched. With regards to the integration of environmental and social aspects of the project, FIPAG, through Supervising Engineers has been ensuring that Contractors perform effectively in minimizing projects' impacts upon the environment and human health, with projects having respective Environmental and Social Management Plans as applicable.

FIPAG has also made it a formal requirement to report on the implementation of environmental and social safeguards, which is done through a specific chapter included in the monthly progress report. Improvements are needed in the reporting component, specifically to indicate in each report what measures were taken to address non-compliance issues identified in previous report. This can be easily achieved by making it a contractual requirement for Contractors and supervising engineers to demonstrate continual improvement in addressing environmental and social aspects of WASIS II projects. Reporting in incidents and accidents also need improvement, specifically to indicate how FIPAG has supported the victims of accidents or incidents, including how such incidents/accidents have been communicated to all relevant stakeholders, including the family of the victims, government authorities and FIPAG's top management.

Experience in implementing a number of WASIS II projects, suggest that FIPAG needs to ensure its physical presence in the close proximity of ongoing projects. This is particularly important to ensure that non-compliances are quickly identified and addressed in a timely manner. A number of frequent social issues arising from WASIS II projects require rapid response, therefore, with a FIPAG environmental and social safeguard specialist on site, delays in decision making process may be minimized. At least one (1) Environmental and Social Safeguard Specialist should be appointed for each city.

Training and capacity building in environmental and social safeguards is also a requirement that should be institutionalized within FIPAG's framework. With support from the World Bank, FIPAG conducted training for the environmental and social safeguards team including staff from both the Supervision Team and contractors. This approach has been helpful in bringing the teams together to discuss the key policies and procedures and how they can be effectively implemented to minimize projects' impacts upon the environment and on human health.

Contractor's teams are encouraged to bring to these trainings issues of concern for clarification and serve as refresher on the key environmental and social requirements of projects.

It is now a Contractual Requirement that the Contractors prepare their own Environmental and Social Management Plan Implementation Plan and Health and Safety Implementation Plans based on the approved ESMPs. These documents are designed to describe how the Contractor intends to implement the environmental, social and health and safety safeguards as we translate them from the approved projects' ESMP to the practical implementation of such measures, with a view to ensure effectiveness in minimizing projects' impacts upon the environment and human health.

15 GUIDELINES FOR ANNUAL REPORTING

These Guidelines have been prepared to assist the project proponents and implementing agencies in reporting on the WASIS II Additional Financing to include water supply system for the Nacala City. The objective of the Guidelines is to provide guidance on the minimum requirements with regards to the timing, format and content of reports related to the project.

Timing

All Annual Reports related to the implementation of the project should be submitted **30 days after the end of a 12-month period** of the project. The period covering the report and the date the report is being submitted should be included in the front page of the document.

Format

The exact **format of the report should be agreed between FIPAG and the World Bank** prior to the commencement of implementation, to ensure compliance with the World Bank requirements.

Content

It is recommended that the report is split into 3 sections: 1) Progress Report 2) Financial Report; and Procurement Report. Each of the sections should further provide information on projects implementation in each of the cities covered by the project and the relevant sub-projects being implemented in each.

The section on Progress Report should be based on agreed work plan for the year on status of planned activities and should include clear outputs and results. For such, a Results Framework or Monitoring and Evaluation (M&E) Framework containing indicators and outputs shall be prepared and agreed by FIPAG and the World Bank. The objective of the Framework will be to systematically track progress of project implementation, in order to demonstrate results on the ground, and assess whether changes to the project design are required in order to take into account evolving circumstances.

The Financial Report section should provide information on status of implementation of overall budget of the project. The annual financial reports should have an introductory narrative and should be in harmony with the Progress Report. It must include a statement showing cash received and expenditure by main expenditure classifications of the period in being reported; beginning and ending cash balances of the project; and supporting schedules comparing actual and planned expenditure.

The Procurement Report should include information on the procurement of goods, work, and related services, and the selection of consultants, and on compliance with agreed procurement methods (GoM and World Bank procedures will apply). In addition to procurement progress, this section should include information on all authorized contract variations; information on complaints by bidders; unsatisfactory performance by contractors; and any major contractual disputes that may have arisen during the reporting period.

The Report should include the status of implementation; information on compliance with the ESMP; the overall performance assessment of each sub-project in each city; key challenges faced and observations. Information on training required or additional resources (human, technical and financial) should also be highlighted where relevant and necessary. An overall

assessment and summary of status of the project as a whole should be provided at the end of the report and should include recommendations for improvements where necessary.

FIPAG is the responsible agency for consolidating and preparing the Annual Report, which is submitted to the World Bank.

CONCLUSION AND RECOMMENDATIONS

It is envisaged that FIPAG will take into account the need to ensure environmental protection in the use of natural resources. As per the World Bank's Operational Policies, the proposed civil works fall under category B projects, due to the nature of the impacts deemed to be low scale and site-specific, and which can be easily mitigated through an Environmental and Social Management Plan (ESMP).

Minimal negative impacts are expected in both construction and rehabilitation of infrastructure especially with regards to the potential need for land acquisition, disturbances and pollution of soils, and waste management, and should be dealt with through an Environmental Management Plan. In relation to the possible need for land acquisition, leading to population displacement and resettlement, an RPF has been prepared separately and parallel to the present ESMF.

In order to ensure an effective implementation of the proposed mitigation measures, the following recommendations should be considered prior to the site selection for the construction/ rehabilitation activities:

- Identify environmental and social management priorities to be integral to the ToRs of the proposed construction/rehabilitation works;
- Conduct periodical monitoring to verify whether the proposed mitigation measures are fully implemented.
- Register, correct and report on all non-compliance issues identified during project implementation.

In order to address the above recommendations, the FIPAG Environmental and Social Specialist is recommended to:

- Identify and contract experienced Environment Officers for all levels as recommended, and make provisions for trainings;
- Identify and train personnel at the district/ municipality level specifically for FIPAG who will be responsible for monitoring of ESMPs at district level, at the Municipality itself and from MITADER if deemed necessary;
- Effective inter-institutional coordination between the key ministries (MITADER and MOPRH) at national, provincial and district level, as well as coordination and collaboration with the Municipalities as they are responsible for the management of urban affairs, to ensure appropriate implementation of the proposed mitigation measures for continual improvement in environmental management.

For an effective integration of the proposed mitigation measures into planning and implementation of the program's activities, the implementation of the ESMP is the responsibility of the Proponent and the Proponent must ensure its compliance by the Contractors. Having said this, the Contractors are obliged to comply with the Environmental and Social Clauses provided for in the ESMP.

It is expected that the negative environmental impacts associated with the proposed civil works will be short-term, localized but significant; however, these can be mitigated through compliance with EIA Regulations and an ESMP.

16 BUDGET FOR THE IMPLEMENTATION OF THE ESMF

The table below provides an estimated budget for the preparation of the ESMF, as well as monitoring, evaluation, auditing and training/ capacity building that will be required for the project management unit, and specifically to be managed by the environment and social management unit.

TABLE 8: ESTIMATED BUDGET FOR THE IMPLEMENTATION OF THE ESMF

Item	Amount in (000 USD)
Implementation of ESMF	
Commencement of Project Implementation	\$190.00
Hiring and Mobilization of Services Providers	\$1,600.00
Technical assistance for identification, preparation and monitoring of sub-projects	\$2,250.00
General Technical Assistance	\$1,350.00
Specific Technical assistance	\$1,280.00
Monitoring	\$900.00
Inspections	\$250.00
Annual Review	\$160.00
Regular Audits	\$1,015.00
Training and Capacity Building	
Recruitment of 5 Environmental Officers	\$300.00 (*por ano)
Specialized Training for Environmental Officers	\$540.00
Environmental Exchange Monitoring Visits amongst the ESOs	\$250.00
Health and Safety at Workplace	
Safety at workplace	\$1,800.00
Higiene and Sanitation	\$1,800.00
HIV/SIDA	\$500.00
First Aid	\$235.00
Preparation and Implementation of ESIA's and ESMPs	
Preparation and Implementation of ESIA's and ESMPs	\$5000.00
Total	\$19,420.00

The total cost for the implementation of the ESMF (such as the preparation and implementation of ESIA's/ ESMPs for specific projects) is of **USD 19,420,000.00**. This Budget represents an increase of 1,690,000.00USD from the original WASIS II's budget which was 17,730,000.00USD, and the increase will fundamentally be used to meet the cost associated to implementation of environmental and Social Safeguards for activities associated to WASIS II Additional Financing.

* In order to meet the cost of recruitment of qualified 5 EOs, an annual total cost of USD300,000.00 is proposed. It is proposed that FIPAG requests initial funding from the World Bank and potentially other donors and after, FIPAG should integrate this cost to its sustainability plan to develop its own financial capacity to meet this cost.

REFERENCE LIST

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APPENDIX 1 - PUBLIC CONSULTATION MEETINGS MINUTES (2015)

WATER SERVICES AND INSTITUTIONAL SUPPORT PROJECT (WASIS II) FOR FIPAG ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF) PRESENTATION

MINUTE OF PUBLIC PARTICIPATION MEETING

17.1 TETE CITY

Date: 18/05/2015

Place: Zambeze Hotel Conference Room

Hora: 09:00 – 11:00

Participants: 15 participants

POWERPOINT PRESENTATION

The consultant Juliana Come, as the facilitator of the meeting, held opening of the session, introducing herself and asking the registration of each participant. After that she started presenting the objectives of the meeting that included: (i) inform on the need to create the environmental and social management framework for the water supply and institutional support (WASIS II) project; (ii) discuss potential environmental and social impacts for water supply projects; (iii) register other environmental and social impacts that were not anticipated.

Then, Juliana Come explained that the creation of the environmental and social management framework for the WASIS II project is a requirement of the World Bank to fund water supply projects in the selected cities. She listed the selected cities, which includes the city of Beira, Dondo, Chimoio, Gondola, Tete, Moatize, Nacala-City, and Pemba. She explained that the WASIS II project aims to improve the existing water transmission network, changing the obsolete pipeline in cement zone (urban area), as well as providing counters to new users, increasing the number of consumers of this service.

Juliana Come passed then to the explanation of the legal aspects of the WASIS II project where she described briefly the need to follow the World Bank Operational Policies (OP) in water supply projects funded by the World Bank. These policies include the OP 4.01 for environmental assessment (regulates participation of the beneficiaries of projects, local government and non-governmental organizations in the public participation process); OP4.04 for natural habitats (regulates the protection, maintenance and rehabilitation of natural habitats); OP4.09 for pest management (relates to agriculture and public health); OP4.10 for indigenous people (land rights and use); OP4.11 for cultural heritage (sacred places, culture and values); OP4.12 for involuntary resettlement (displacement, compensation process); OP4.36 for forests (protection and rehabilitation); OP4.37 for safety of dams (related to water abstraction); OP7.50 for projects on international waterways (regulates procedures for international such as rivers and lakes); OP7.60 for projects in disputed areas (regulates coordination and agreements between different entities with interests and activities in the same area, p.eg. water transmission main located at the same area as the optic cables of TDM⁶ and passing through a paved road of ANE⁷). She also made reference to the Mozambican legislation, citing the decree 42/2008

⁶ TDM stands for Telecommunications of Mozambique.

⁷ ANE stands for National Roads Administration.

of 4 November which regulates the environmental impact assessment; the decree 130/2006 for public participation processes; and the water law 43/2008 of 30 October.

It followed the explanation of the objectives of the public participation process, the environmental situation of the country and the positive environmental and social impacts of the WASIS II project. She said that, in terms of benefits, the project will provide more coverage through the increase of the number of connections by a diverse number of users; more security in the access to clean water during the day; and an increase in business development possibilities in sectors and activities in which water supply is a critical factor. With regard to the negative impacts, Juliana Come presented the impacts that occur in different phases of water supply projects. She described seven phases namely: (1) water abstraction from river or lake; (2) water abstraction from wells field; (3) water abstraction pump station; (4) water treatment works; (5) water transmission main; (6) water reservoirs; (7) urban water distribution. The main impacts presented in these phases included water pollution on surface and groundwater sources; ecological issues; saline intrusion; climate change issues; resettlement and compensation; vandalism; conflicting land use and ownership; impacts on groundwater levels; diseases associated with stagnant water from leakages; public nuisance; and visual impacts.

Juliana Come ended the presentation referring to the increased efficiency of services provided in urban areas; increased coverage in peri-urban areas, reducing water leakages and strengthen the institutional and regulator water supply regional chain. She added that the preparation of the ESMF does not replace the EIA and that it is important in this phase to collect contributions of the participants in the meeting in order to anticipate, minimize and mitigate negative impacts. Then she invited the participants to the debate session.

ISSUES AND RESPONSES SESSION

Issues (I) and Responses (R):
<p>P - Osvaldo Miambo, accountant at Ara-Zambeze: I would like to suggest the inclusion of the noise as a sound impact that normally remains unnoticed and it is also pertinent. With regard to the sludge that is formed during the water treatment process, it is important to find a mode to reuse the sludge in agriculture as fertilisers and consider its ecological volume.</p> <p>What criterion was used to select the cities that will benefit from water supply projects?</p>
<p>R - Juliana Come, Environmental Consultant: We thank you for your contribution. The case of reuse of sludge will be carefully analysed because in cases where is not possible to reuse such sludge, it is necessary to find the appropriate area for hazardous waste disposal to avoid soils contamination and pollution. The selected cities for the WASIS II project have critical water supply problems in the urban area and a growing demand of water in the peri-urban areas. With the approval of the ESMF and the funding from the World Bank, water supply projects will be developed in priority areas of the selected cities.</p>
<p>P - Manuel José, hydrologic technician at Ara-Zambeze: I would like to have information about the water sources for our city and the volume of water that will be provided.</p>
<p>R - Juliana Come, Environmental Consultant:</p>

Technical and detailed information about the specific type of water abstraction and volume of water in each city is not defined yet. At this stage, which is the project planning stage, we are holding public participation meetings in the selected cities to identify with the participants potential environmental and social impacts of water supply projects and record contributions with respect to existing water problems. Water sources and volumes will be defined during the design of the sub-projects and more public participation meetings will be conducted for environmental impact assessment studies of these sub-projects.

P - João Duarte, operations officer at TDM⁸:

I would like to know if, at the EIA phase, companies that work with the underground as the case of TDM and EDM, will be contacted to coordinate the connection and replacement of water transmission mains. This is important to minimize the destruction and damage of cables and other underground equipment.

R - Juliana Come, Environmental Consultant:

When completed the planning phase and the Government receive the funds from the World Bank, water supply sub-projects will be developed in the cities selected for the WASIS II project. The Ministry of land, environment and rural development (former Ministry of environment) will categorize according with specific instructions of processes. In cases of projects category A and B, where public participation is required, will be invited all interested and affected parties of the sub-project including entities with different interests in the project area to collaborate and coordinate.

P - Jorge Real, Planning officer at DPS⁹:

What are the aspects that can be leveraged in the communication component in relation to conflicts of interest in the implementation of this project?

Still in the aspect of communication and sharing of family-run areas, I would like to suggest the Government/FIPAG to have attention to studies that will be done to consider values and perceptions mechanisms of local people. Even if social impacts are temporary, as normally occurs in water supply projects, the Government/FIPAG should take into account cumulative impacts that might occur after the conclusion of the activities.

R - Juliana Come, Environmental Consultant:

I appreciate your contributions, we will consider. Various interested parties are invited at an early stage of projects to interact in forums like this to coordinate different interests and activities occurring in the same area. The meetings will be both at the district and local level. When there is no coordination and conflicts are eminent, conflict management committees and members parties are established with the participation of the local government.

P - Wache Matavele, technician at FIPAG¹⁰:

We know about cases of land conflicts in the city of Tete where water abstraction in fields where agriculture is practiced. How to solve these cases of land conflicts? Tete has serious water supply problems especially in Moatize. I would like to know when the projects will start. Is the WASIS II an extension of the WASIS I?

⁸ Telecommunications of Mozambique.

⁹ Provincial Directorate of Health.

R - Juliana Come, Environmental Consultant:

The normal procedure is the resettlement and compensation but there are also cases of redesign of the project in order to pass through certain zones. The government is seeking for funding to address water demand and solve problems related to it. I cannot anticipate dates because I do not have this information. We have only dates for submission of the ESMF which must be submitted in the first weeks of June. The World Bank will take its time to analyse and approve. Only after that will be designed specific projects for the cities covered by this program.

I would not say that the WASIS II is an extension of the WASIS I because WASIS I have its own extension. The WASIS II is another project. The name remains the same because it is also a water services and institutional support.

P - Arlindo Avelino, fiscal president of the farmers union for the Nhamatanda Valley:

There are many holes and we have many problems because our fields surround the holes. When there is water leakage we communicate FIPAG Picket and they take days to close and repair the leakage. This situation floods our fields and we lose our crops. We also have problems with the access and maintain the holes and destroy our crops. We agreed with FIPAG a way for holes maintenance and when the time for maintenance comes FIPAG do not obey and destroy our cultures with their vehicles. We spend energy and resources to grow our cultures and this should be considered.

R - Juliana Come, Environmental Consultant:

Thank you for your contribution.

Once the interviews were completed Juliana Come mentioned the comments registration sheet and asked the participants to take them with them, fill and send within a week to the address provided in it. The meeting ended at 10:30 hours.



WATER SERVICES AND INSTITUTIONAL SUPPORT PROJECT (WASIS II) ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF) PRESENTATION

MINUTE OF PUBLIC PARTICIPATION MEETING

17.2 CHIMOIO CITY

Date: 20/05/2015

Place: Vumba Room, Hotel Inter Chimoio

Hora: 12:15 – 13:30

Participants: 15 participants

POWERPOINT PRESENTATION

The consultant Juliana Come, as the facilitator of the meeting, held opening of the session, introducing herself and asking the registration of each participant. After that she started presenting the objectives of the meeting that included: (i) inform on the need to create the environmental and social management framework for the water supply and institutional support (WASIS II) project; (ii) discuss potential environmental and social impacts for water supply projects; (iii) register other environmental and social impacts that were not anticipated.

Then, Juliana Come explained that the creation of the environmental and social management framework for the WASIS II project is a requirement of the World Bank to fund water supply projects in the selected cities. She listed the selected cities, which include Beira, Dondo, Chimoio, Gondola, Tete, Moatize, Nacala-City, and Pemba. She explained that the WASIS II project aims to improve the existing water transmission network, changing the obsolete pipeline in cement zone (urban area), as well as providing counters to new users, increasing the number of consumers of this service.

Juliana Come passed then to the explanation of the legal aspects of the WASIS II project where she described briefly the need to follow the World Bank Operational Policies (OP) in water supply projects funded by the World Bank. These policies include the OP 4.01 for environmental assessment (regulates participation of the beneficiaries of projects, local government and non-governmental organizations in the public participation process); OP4.04 for natural habitats (regulates the protection, maintenance and rehabilitation of natural habitats); OP4.09 for pest management (relates to agriculture and public health); OP4.10 for indigenous people (land rights and use); OP4.11 for cultural heritage (sacred places, culture and values); OP4.12 for involuntary resettlement (displacement, compensation process); OP4.36 for forests (protection and rehabilitation); OP4.37 for safety of dams (related to water abstraction); OP7.50 for projects on international waterways (regulates procedures for international such as rivers and lakes); OP7.60 for projects in disputed areas (regulates coordination and agreements between different entities with interests and activities in the same area, p.eg. water transmission main located at the same area as the optic cables of TDM11 and

¹¹ TDM stands for Telecommunications of Mozambique.

passing through a paved road of ANE12). She also made reference to the Mozambican legislation, citing the decree 42/2008 of 4 November which regulates the environmental impact assessment; the decree 130/2006 for public participation processes; and the water law 43/2008 of 30 October.

It followed the explanation of the objectives of the public participation process, the environmental situation of the country and the positive environmental and social impacts of the WASIS II project. She said that, in terms of benefits, the project will provide more coverage through the increase of the number of connections by a diverse number of users; more security in the access to clean water during the day; and an increase in business development possibilities in sectors and activities in which water supply is a critical factor. With regard to the negative impacts, Juliana Come presented the impacts that occur in different phases of water supply projects. She described seven phases namely: (1) water abstraction from river or lake; (2) water abstraction from wells field; (3) water abstraction pump station; (4) water treatment works; (5) water transmission main; (6) water reservoirs; (7) urban water distribution. The main impacts presented in these phases included water pollution on surface and groundwater sources; ecological issues; saline intrusion; climate change issues; resettlement and compensation; vandalism; conflicting land use and ownership; impacts on groundwater levels; diseases associated with stagnant water from leakages; public nuisance; and visual impacts.

Juliana Come ended the presentation referring to the increased efficiency of services provided in urban areas; increased coverage in peri-urban areas, reducing water leakages and strengthen the institutional and regulator water supply regional chain. She added that the preparation of the ESMF does not replace the EIA and that it is important in this phase to collect contributions of the participants in the meeting in order to anticipate, minimize and mitigate negative impacts. Then she invited the participants to the debate session.

ISSUES AND RESPONSES SESSION

Issues (I) and Responses (R):

I – Eusebio Andrade, vereador at Conselho Municipal:

It is a pity the way this public meeting was organized because it should reflect what the name says. I am not sure if these 5 or 6 participants will reflect the sensitivity and feeling of the residents of Chimoio. However, we will do our best to contribute. My understanding is that this meeting intends to understand if Chimoio is happy with the current situation of water supply. I must say that we are not happy with it. The urban area might have some considerable coverage and satisfaction but the peri-urban areas need expansion of the water supply system. In our presentation you referred that this program aims to rehabilitate the existing water supply system in urban areas and expand it to peri-urban areas. Many suburbs of Chimoio demand water supply services and I hope this program provides water supply for the residents in these areas. You also presented the cities that will benefit from the project and we heard that the Government is applying for funding from the World Bank. What was not clear was the temporal horizon of this project and the budget for it.

R – Juliana Come, Environmental Consultant:

Thank you for your contribution. At this stage, the planning phase, we have to prepare the environmental and social management framework (ESMF) and we did not define yet the duration of it. We only identify the cities that will be benefited by the projects as part of the process to apply for funds. The World Bank required the creation of the ESMF and the

¹² ANE stands for National Roads Administration.

identification of potential environmental and social impacts that occur in water supply projects. As you can noticed in the document of discussion there are some amounts presented on it and the whole program was budgeted at around 180 million dollar.

I - Daniel Chamussara, technician at the DPS¹³:

This program is welcome in Chimoio. In the urban area some of our water supply problems were minimized but not mitigated. In certain zones such as *7 de Setembro* suburb, the pipes are superficial and cases of leakages often occur and increases the risk of diseases associated with stagnant water from leakages. It is necessary to address these problems.

R – Juliana Come, environmental consultant:

Thank you for your contribution.

I – César Salika, municipal assembly member:

Within this funding from the World Bank is it included a dam construction? I am asking this because in the 1980s Chimoio had three dams supplying the city with water. For example, the *Textafrika* dam still exists but FIPAG shut it down and now it is completely dry. *Chicamba* dam is intended to provide only electricity. *Gondola* dam has been used by the CFM¹⁴ but I do not have information about the uses.

I would also like to comment on the deficient service of the maintenance sector at FIPAG as they take days to close wells and rehabilitate pipes with leakages.

R – Juliana Come, Environmental Consultant:

Thank you for your contribution. I am not sure if a dam construction will be included in the water supply project.

I – Filipe Mandava, technical staff at the DPOPH¹⁵:

Water supply at Chimoio city level is not efficient particularly among the peri-urban areas. Leakages are the major problem, followed by superficial digging made by contractors. FIPAG should find a way to supervise the excavations to ensure that the pipes will be placed at the required depth.

R – Juliana Come, Environmental Consultant:

Thank you for your contribution.

I – Américo Muchate, Municipal assembly member:

I would like to contribute with an example of the problem many residents of Chimoio face. Often we do not have water supply for days but we always receive costly invoices. FIPAG has a deficient management system which requires the consumer to pay first and complain after.

Another problem is the fact that the new suburbs have no water supply. For example, at *7 de Abril* suburb the residents have access to water only few hours a day. FIPAG defend that this is due to the size of the diameter. At the *Heróis de Moçambique* suburb which is quite new, all residents have their own hole when the suburb has a big water conduct. At *25 de Setembro* suburb FIPAG destroyed the paved road to install a conduct and the area has not been rehabilitated yet. It is necessary to find a better approach.

R – Juliana Come, environmental consultant:

Thank you for your contribution.

¹³ DPS stands for Provincial Directorate of Health.

¹⁴ CFM is the Mozambique Railway Company.

¹⁵ DPOPHRH stands for Provincial Directorate of Public Works, Housing and Water Resources.

I – César Salika, municipal assembly member:

I refer to the World Bank operational policy that states that the habits and costumes, I would like to comment on the following: I am resident at the Blue Building (*Prédio Azul*) and FIPAG changed the hole without consulting and requesting authorization. We were forced to pay for their services. After few months FIPAG removed the tanks, did not close the holes and also send us a costly invoice. Currently we are trying to reopen the hole and it is necessary 140 000, 00 Mt. I suggest, in the future, when removing their equipment, they have to leave the place in the same conditions as before their intervention.

R – Juliana Come, Environmental Consultant:

Thank you very much.

I – Arão Januário, head of the planning department:

This project should consider the coordination between institutions. Currently we are facing serious urbanization problems. Since we are talking about expansion of new suburbs, we have FIPAG, EDM, and TDM operation in same areas and is necessary an effective coordination in order to have good urbanization. What normally happen is that first we have the citizen building and only then the municipality provides the access road. The municipality has the policy to avoid occupation of concession spaces and often turn obstacles. When the time to install the conduct comes it is necessary to follow the same line designed by the municipality and, with curves we have leakages.

Another problem is the fact that the urban area here in Chimoio is in a slope and the municipality does not have conditions to put the cable underground. Then FIPAG comes and put the cables in a swallow zone and when it rains there is erosion and soil displacement. If we look at the quote, we will notice that it has been decreasing as the soil displaced is never replaced.

Juliana Come, environmental consultant:

Thank you for your contribution.

Once the interventions had been completed Juliana Come mentioned the comments registration sheet and requested the participants to take with them, fill and send within two days to the address provided in it. The meeting ended at 13:30 hours.

**WATER SERVICES AND INSTITUTIONAL SUPPORT PROJECT (WASIS II)
ENVIRONMENTAL AND SOCIAL POLICY MANAGEMENT FRAMEWORK
PRESENTATION**

MINUTE OF PUBLIC PARTICIPATION MEETING

17.3 MOATIZE CITY

Date: 18/05/2015

Place: Conference Room at the Municipal Assembly

Hora: 14:15 – 16:00

Participants: 35 attendants

POWERPOINT PRESENTATION

The consultant Juliana Come, as the facilitator of the meeting, held opening of the session, introducing herself and asking the registration of each participant. After that she asked the participants to present themselves, referring to their institution and position. Then she started presenting the objectives of the meeting that included: (i) inform on the need to create the environmental and social management framework for the water supply and institutional support (WASIS II) project; (ii) discuss potential environmental and social impacts for water supply projects; (iii) register other environmental and social impacts that were not anticipated.

Then, Juliana Come explained that the creation of the environmental and social management framework for the WASIS II project is a requirement of the World Bank to fund water supply projects in the selected cities. She listed the selected cities which include Beira, Dondo, Chimoio, Gondola, Tete, Moatize, Nacala-City, and Pemba. She explained that the WASIS II project aims to improve the existing water transmission network, changing the obsolete pipeline in cement zone (urban area), as well as providing counters to new users, increasing the number of consumers of this service.

Juliana Come passed then to the explanation of the legal aspects of the WASIS II project where she described briefly the need to follow the World Bank Operational Policies (OP) in water supply projects funded by the World Bank. These policies include the OP 4.01 for environmental assessment (regulates participation of the beneficiaries of projects, local government and non-governmental organizations in the public participation process); OP4.04 for natural habitats (regulates the protection, maintenance and rehabilitation of natural habitats); OP4.09 for pest management (relates to agriculture and public health); OP4.10 for indigenous people (land rights and use); OP4.11 for cultural heritage (sacred places, culture and values); OP4.12 for involuntary resettlement (displacement, compensation process); OP4.36 for forests (protection and rehabilitation); OP4.37 for safety of dams (related to water abstraction); OP7.50 for projects on international waterways (regulates procedures for international such as rivers and lakes); OP7.60 for projects in disputed areas (regulates coordination and agreements between different entities with interests and activities in the same area, p.eg. water transmission main located at the same area as the optic cables of TDM¹⁶ and passing through a paved road of ANE¹⁷). She also made reference to the Mozambican legislation, citing the decree 42/2008

¹⁶ TDM stands for Telecommunications of Mozambique.

¹⁷ ANE stands for National Roads Administration.

of 4 November which regulates the environmental impact assessment; the decree 130/2006 for public participation processes; and the water law 43/2008 of 30 October.

It followed the explanation of the objectives of the public participation process, the environmental situation of the country and the positive environmental and social impacts of the WASIS II project. She said that, in terms of benefits, the project will provide more coverage through the increase of the number of connections by a diverse number of users; more security in the access to clean water during the day; and an increase in business development possibilities in sectors and activities in which water supply is a critical factor. With regard to the negative impacts, Juliana Come presented the impacts that occur in different phases of water supply projects. She described seven phases namely: (1) water abstraction from river or lake; (2) water abstraction from wells field; (3) water abstraction pump station; (4) water treatment works; (5) water transmission main; (6) water reservoirs; (7) urban water distribution. The main impacts presented in these phases included water pollution on surface and groundwater sources; ecological issues; saline intrusion; climate change issues; resettlement and compensation; vandalism; conflicting land use and ownership; impacts on groundwater levels; diseases associated with stagnant water from leakages; public nuisance; and visual impacts.

Juliana Come ended the presentation referring to the increased efficiency of services provided in urban areas; increased coverage in peri-urban areas, reducing water leakages and strengthen the institutional and regulator water supply regional chain. She added that the preparation of the ESMF does not replace the EIA and that it is important in this phase to collect contributions of the participants in the meeting in order to anticipate, minimize and mitigate negative impacts. Then she invited the participants to the debate session.

ISSUES AND RESPONSES SESSION

Issues (I) and Responses (R)

I - Avelino Saene Dingo, resident at the Liberdade suburb:

The project is welcome. Regarding water supply, I would like to know if when the project comes, the water supply will benefit only the citizens or will also include major projects. If it is for both it is necessary to consider the volume of water provided as the major projects are the biggest water consumers and this might dry up water for the citizens. How this situation will be addressed?

With regard to resettlement, will the World Bank also fund the resettlement or it has to be paid by the government?

With regard to water abstraction from wells I would like to suggest that FIPAG note the problems caused by silting. In cases of abstraction from river or lakes it is necessary to be aware of the issue of dust and find minimization measures for it.

Will the water distribution network be new or will only replace the obsolete equipment?

What will be the implementation period of the project?

I believe this project will improve the quality of life of users. The existing water supply system has serious problems and there are areas with no water at all despite having installed piping, mainly in dry season.

R - Juliana Come, Environmental Consultant:

Thank you for your contribution. With relation to your first question, about the beneficiaries of the water supply, I might say that at this stage we do not have information if whether the major projects will be included in the water supply project or not. We only know that the

WASIS II project aims to improve the existing water supply system and expand into new areas for the citizens. The program intends to supply the selected cities but it is not defined yet how exactly this supply will be effectuated. Maybe Mr Milton from FIPAG Maputo has something to add regarding this question.

R – Milton Nhachengo, technician at FIPAG Maputo:

The purpose of this meeting is to understand environmental and social impacts of water supply projects. Despite the fact that your question is pertinent, at this stage we do not have such information. With relation to resettlement, this program intends to anticipate such cases and the World Bank requires the Government to be prepared. This stage is premature to have answers to specific questions from the technical side of the program.

R – Juliana Come, Environmental Consultant:

Perhaps add that your question about the volume will be recorded and placed on the Government to be taken into account at the EIA phase. Outputs of these meetings will be included in the creation of the environmental and social management framework (ESMF), which will be submitted to the World Bank for approval and funding. After that, sub-projects will be developed and environmental impact assessment studies will be conducted. Depending on the categorization by the Ministry of land, environment and rural development, public participation meetings, environmental management plans and resettlement action plans will be conducted depending on the specifications of each project, everything funded by the World Bank. The ESMF is planning to provide new water distribution network in peri-urban areas and rehabilitate the existing system in the concrete zone.

I– Eusebio Mouzinho, leader of the ward at Moatize village:

I heard the explanation of the technician of FIPAG Maputo saying that we are gathered here to discuss impacts of water supply projects and I am not well framed in this regard. As if we are discussing maternal-child education for a woman who has no child. Why this discussion cannot take place when FIPAG develop the project X for Moatize, with specific impacts and we would be here contributing for it? We have serious silting problems in our fields and it I believe that to address such problems in Moatize it is better to abstract water from Rovubue river. When we look at the company VALE, they have water with pressure from Zambeze river but we do not have it. I do not know how we can discuss about environmental and social impacts of a project that does not exist. Will we have a project in Moatize?

R – Juliana Come, environmental consultant:

Thank you for your contribution. I will answer your question in a minute, let us hear the question from the participant who has his hand raised up for a while and it might be a related question.

I – Marcelo Chitica, leader at the Conselho Municipal Moatize village:

The impacts are real, both positive and negative. Few days ago I went through the line of the company VALE and I saw a very good pipe and pressure. My understanding is that water abstraction from river has more negative impacts than water abstraction from wells. Our water is from Rovubue river but is not good. In order to supply Moatize with good water is better to abstract from the Zambezi river, as VALE does.

R – Juliana Come, Environmental Consultant:

Answering the questions of Mr Eusebio and Marcelo, first I must say that we want to create a program for the Government in order to obtain funding and be able to develop projects for

water supply in Moatize and other selected cities. We cannot compare the Government with the company VALE that has its own resources to obtain water. The Government has to seek funding to supply water to the citizens. This meeting and the creation of the environmental and social management framework is part of the funding process, as a requirement of the World Bank, our funder. This action is important to anticipate at the earlier stage of the planning process environmental and social impacts of water supply projects and propose mitigation measures for negative impacts. Another reason is to ensure that all projects are developed on the same line complying with the World Bank policies and procedures. Therefore, following the line of Mr Eusebio, it is indeed important to talk about maternal-child education for women who has no children so that when women plan to have their child they will know already how to be prepared.

R - Milton Nhachengo, technician at FIPAG Maputo:

I would like to strengthen one aspect. If we look at the project information document (discussion paper provided at the meeting), there is one aspect that speaks of reducing the water seeking for women. It is one of the World Bank objectives to ensure that women access water faster and have time for other activities. The social side of this aspect is that women and child (mainly girls) can have opportunity to go to school rather than spending time seeking for water. The environmental issue is the general question of everyone here. The World Bank does not want to fund projects that in the future will bring negative impacts, for example, a zone funded by the World Bank ceased to exist or is polluted by a project. We have a positive contribution of Mr Marcelo Chitica who said that good water should be pursued to 17 km of Moatize. This contribution will be recorded and taken into consideration at the design and implementation phase of the sub-projects.

I - Martinho Bacacheza, Municipal assembly member:

When the president of this municipality invited us to discuss the issue of water in Moatize I was excited because Moatize has serious water supply problems. After the conclusion of the second phase of the construction of two deposits, the water supply improved considerably but over time began to fail. Later, we met the provincial delegate and he announced this project. To solve this problem, we believe that the holes distance for water abstraction from wells should be within 100 metres but we found in the holes fields holes with only 10 to 50 meters distance. I would like to propose the Government/ FIPAG to apply for funding to open another water abstraction centre from wells that is distant 17 km. Such distance was suggested by the provincial delegate and we believe that it is based on previous analysis. We were hopeful that we would have a water supply project but now that we are learning that this meeting intends to prepare a program to apply for funding for projects we do not know when the water will come.

With regard to resettlement, it is important to choose a good area and be aware of areas close to the Rovubue river such as in Capanga where there are serious erosion issues. Aside from this issue, the area of Capanga could provide us with water in sufficient quantity and meet our needs because this area has mountains that ends at Rovubue river and might provide pressure for water. If we consider the passage of the conduct over or near the edge of these mountains there will be no resettlement issues.

I would like to hear that some of the research work for the design of project is already done and that the water is already coming. Here in Moatize the water supply problem is so serious that the governmental structures are not well seen here because of this problem. I would also like to propose that when the project comes benefit only the citizens.

R - Juliana Come, consultora ambiental:

Thank you for your contributions.

I – Domingos Augusto Paulo, Non-governmental organization World Vision:

Considering the fact that Moatize has serious soil problems such as silting I would like to propose the installation of laboratories to analyse the quality of water being provided to avoid human health problems. I would like to comment on the guarantees within the waste removal during water treatment processes. During the presentation it was said that certain sludge when not taken appropriate care can cause ecological issues. What are the guarantees that in fact this toxic waste will be removed and given the proper treatment?

Finishing, I would like to know who the proponent of the project is and be clarified about the selection criteria for the cities covered by the WASIS II.

R - Juliana Come, Environmental Consultant:

Thank you. The Government of Mozambique is the proponent of the project. FIPAG was appointed by the Government as the water supply implementing agency and the World Bank is the lender. With regard to cities selection criteria, the WASIS II choose cities that are growing rapidly, have a growing demand for water services and serious problem in the existing system in urban areas. Today I learned from the president of this municipality that we are proposing a water supply project to Moatize when it had already been selected during WASIS I but nothing was done. WASIS I is currently being implemented and its extension goes until 30 October 2015. For this reason, the Government of Mozambique decided to create another water supply and institutional support project, termed WASIS II and apply for its own fund.

I– Tomás Paulo da Graça, District Permanent Secretary:

The project is owned by the Government and I will not provide different comments from the participants. I suggest a very deep analysis for resettlement cases. The resettlement currently taken place is mining the trust of communities. During public meetings the proponents of projects agree in respecting certain conditions that are ignored at the resettlement phase. I suggest the inclusion of local people and not just meetings for people that is able to identify potential impacts of projects.

R - Juliana Come, Environmental Consultant:

At the EIA phase meetings will be lead not only at the district level but also at the local level. This meeting does not have a specific project and for this reason does not include the locals. We only need general potential environmental and social impacts of projects. When we have specific projects to benefit the communities we go there to know from them what they actually need. At this stage we use various methods to collect information which includes specific focus group meetings and personnel interviews to ensure that for example, in cases of water projects where women is responsible for water seeking can express freely.

I – Fernando Siasse, president of the municipal assembly:

First thanks the project that provides opportunity for us to have this debate. The project is welcome. However, it is important, at the EIA phase, to choose the proper location for the wells field. In Moatize the drilling holes process is challenged by the coal rocks. The holes opening time should also be considered because, for example, this time of year is not ideal as the groundwater is still high. Between August and September we normally have water scarcity which makes this period not suitable for opening holes. I would suggest a study to identify the best time for it but I suggest the opening after September.

R - Juliana Come, Environmental Consultant:

Thank you for your contribution.

I - Eusebio Mouzinho, area leader of Moatize village:

I would like to draw attention to the importance of enforcement. Often the holes are open and as soon as the water comes then stop digging even if does not have the required depth.

I – Fernando Siasse, president of the municipal assembly:

I agree with Mr Eusebio. It is necessary to be rigid and comply with the terms of reference for opening of holes. If the requirement says 100 meters and the water is available from 20 meters it is necessary to complete the 100 meters.

R – Juliana Come, Environmental Consultant:

Thank you. It will be registered and considered at the projects implementation phase.

I - Domingos Augusto Paulo, Non-governmental organization World vision:

The problem here is to define who will supervise the opening of holes to ensure that the requirements for it are observed.

I – Juliana Come, environmental consultant:

Thanks for such a valuable contribution. In your opinion, how is the water quality in Moatize?

R – Avelino Saene Dingo, resident of Liberdade neighborhood:

There was a time that we had an explanation of the leakage in some pipes that resulted in contamination of water and the water supplied from the distribution system was blurred. Aside from the quality of water, the quantity is also a problem here. The water supply service is about two hours per day average and there are areas where do not benefit from it for days.

I – Tomás Paulo da Graça, District Permanent Secretary:

From 2013 – 2014 there was a project where a new pipeline was installed in Bagamoio neighbourhood but the line never worked. The problem is that I do not know if it brought positive changes or not. Is this program planning to use this new pipeline or will install another one?

I – Ana Torcida Vaz, secretary of the unit:

I live in one of the areas that benefited from this pipeline but nothing ever happened. Additionally, we use to access from an old well close to us but now it only have water for one hour a day, from 7 to 8 am.

R – Juliana Come, Environmental Consultant:

Thank you. Your question will be registered and we will find out about this pipeline.

Completed the interventions Juliana Come mentioned the comments registration sheet and asked the participants to take with them, fill and send within a week to the address provided on it. The meeting ended at 15:45 hours.

**WATER SERVICES AND INSTITUTIONAL SUPPORT PROJECT (WASIS II) FOR FIPAG
ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)
PRESENTATION**

MINUTE OF PUBLIC PARTICIPATION MEETING

17.4 BEIRA CITY

Date: 21/05/2015

Place: Rainbow Hotel Conference Room

Hora: 09:00 – 11:00

Participants: 15 participants

POWERPOINT PRESENTATION

The consultant Juliana Come, as the facilitator of the meeting, held opening of the session, introducing herself and asking the registration of each participant. After that she started presenting the objectives of the meeting that included: (i) inform on the need to create the environmental and social management framework for the water supply and institutional support (WASIS II) project; (ii) discuss potential environmental and social impacts for water supply projects; (iii) register other environmental and social impacts that were not anticipated.

Then, Juliana Come explained that the creation of the environmental and social management framework for the WASIS II project is a requirement of the World Bank to fund water supply projects in the selected cities. She listed the selected cities which include Beira, Dondo, Chimoio, Gondola, Tete, Moatize, Nacala-City, and Pemba. She explained that the WASIS II project aims to improve the existing water transmission network, changing the obsolete pipeline in cement zone (urban area), as well as providing counters to new users, increasing the number of consumers of this service.

Juliana Come passed then to the explanation of the legal aspects of the WASIS II project where she described briefly the need to follow the World Bank Operational Policies (OP) in water supply projects funded by the World Bank. These policies include the OP 4.01 for environmental assessment (regulates participation of the beneficiaries of projects, local government and non-governmental organizations in the public participation process); OP4.04 for natural habitats (regulates the protection, maintenance and rehabilitation of natural habitats); OP4.09 for pest management (relates to agriculture and public health); OP4.10 for indigenous people (land rights and use); OP4.11 for cultural heritage (sacred places, culture and values); OP4.12 for involuntary resettlement (displacement, compensation process); OP4.36 for forests (protection and rehabilitation); OP4.37 for safety of dams (related to water abstraction); OP7.50 for projects on international waterways (regulates procedures for international such as rivers and lakes); OP7.60 for projects in disputed areas (regulates coordination and agreements between different entities with interests and activities in the same area, p.eg. water transmission main located at the same area as the optic cables of TDM¹⁸ and passing through a paved road of ANE¹⁹). She also made reference to the Mozambican legislation, citing the decree 42/2008 of 4 November which regulates the environmental impact assessment; the decree 130/2006 for public participation processes; and the water law 43/2008 of 30 October.

It followed the explanation of the objectives of the public participation process, the environmental situation of the country and the positive environmental and social impacts of

¹⁸ TDM stands for Telecommunications of Mozambique.

¹⁹ ANE stands for National Roads Administration.

the WASIS II project. She said that, in terms of benefits, the project will provide more coverage through the increase of the number of connections by a diverse number of users; more security in the access to clean water during the day; and an increase in business development possibilities in sectors and activities in which water supply is a critical factor. With regard to the negative impacts, Juliana Come presented the impacts that occur in different phases of water supply projects. She described seven phases namely: (1) water abstraction from river or lake; (2) water abstraction from wells field; (3) water abstraction pump station; (4) water treatment works; (5) water transmission main; (6) water reservoirs; (7) urban water distribution. The main impacts presented in these phases included water pollution on surface and groundwater sources; ecological issues; saline intrusion; climate change issues; resettlement and compensation; vandalism; conflicting land use and ownership; impacts on groundwater levels; diseases associated with stagnant water from leakages; public nuisance; and visual impacts.

Juliana Come ended the presentation referring to the increased efficiency of services provided in urban areas; increased coverage in peri-urban areas, reducing water leakages and strengthen the institutional and regulator water supply regional chain. She added that the preparation of the ESMF does not replace the EIA and that it is important in this phase to collect contributions of the participants in the meeting in order to anticipate, minimize and mitigate negative impacts. Then she invited the participants to the debate session.

ISSUES AND RESPONSES SESSION

Issues (I) and Responses (R):
<p>I – Pedro Arone, professor at UP²⁰ Beira: During the presentation I learn that the project intends to provide water supply to urban and peri-urban areas. Many zones in expansion are characterized by disorderly occupation than does not follow the standard for urbanization. These areas often face leakages problems due to the way This fact challenges the installation of conducts and a normal water distribution system. Was this issue anticipated? How the program is planning to address this problem?</p>
<p>R – Juliana Come, Environmental Consultant: Thank you for your contribution. It will be considered during the preparation of the ESMF. I do not think this problem was anticipated at this stage. Even areas disorderly occupied demand water supply services and the residents of these areas have the right to access water.</p>
<p>R – Milton Nhachengo, technician at FIPAG Maputo: One of the objectives of this meeting is to learn about these aspects and understand the previous errors of projects implemented before and be prepared for it.</p>
<p>I – Augusto Paulo, technician at CMB²¹: I would like to suggest the first phase of the project focus on the rehabilitation of the system. After that work on the extension of the existing water distribution network to peri-urban areas. I suggest this because the existing water distribution network in the urban area has serious problems and it is better to address these problems first to avoid the creation of more problems.</p>
<p>R – Juliana Come, Environmental Consultant: Thank you for your contribution. The ESMF is an overall program for water services and institutional support. It contemplates rehabilitation of existing systems in the selected cities</p>

²⁰ UP stands for Pedagogic University

²¹ CMB is the Beira City Council.

and expansion to new areas among the peri-urban areas. After the approval of the program and the designing of sub-projects for different zones of each city, it will be considered priority areas for improvements. I do not think the rehabilitation will take place at the same time with the expansion but your suggestion will be registered in this ESMF and considered during the design of the sub-projects.

R – Milton Nhachengo, technician at FIPAG Maputo:

The ESMF will include recommendations, for example, the necessary coordination between EDM; TDM and the municipalities in order to have a more efficient management of spaces used by different entities. What is your experience regarding coordination of these institutions in previous projects? What were the main aspects considered? Who should we consult for the project implementation phase? During the meeting in Tete City we had a valuable contribution from a farmer from Nhartanda suburb regarding the location of the FIPAG's holes field surrounded by crops of the residents of Nhartanda. When there is leakage in the holes FIPAG takes long time to repair and remove the water and this flood their crops. Another problem is the destruction of cultures when FIPAG tries to rehabilitate or check their holes. Meetings such as this one are the appropriate forum to present problems as the example in order to plan future holes considering for example maintenance and access.

I – Matias Muromo, Technician at FIPAG Beira:

Unfortunately, with no specific project it is hard to provide contributions. Even though, I would like to know if the program identified already the zones that will benefit from water on the selected cities.

R – Juliana Come, Environmental Consultant:

At this stage of the project, the suburbs and water sources for each city is not identified yet, only the cities. This is the right forum to get directions and contributions to better define specific projects to each city.

I – Beatriz Dias, technician at DPTADER²²:

Unfortunately I came late and I could not attend the entire presentation. I would like to understand the objective of this meeting. Are we here preparing the WASIS II project or there is a project already created and we have to provide inputs for it? Is this a public consultation meeting or we as institutions have to contribute regarding our sensitivities on the water supply service?

R – Juliana Come, Environmental Consultant:

FIPAG is developing the ESMF which is a program form water supply services here referred as WASIS II. At this stage, which is the planning stage, the World Bank, our funder, required the elaboration of the ESMF program where potential environmental and social impacts are included. This meeting aims to collect inputs of water supply impacts, issues and considerations. We have invited representatives of provincial delegations and other organizations that unfortunately are not here represented. We have identified some potential impacts and we would like to have more. When conclude the ESMF, submit and get the approval from World Bank, specific projects will be developed for the selected cities.

I – Beatriz Dias, technician at DPTADER Now I understood that we are here to contribute with inputs to the creation of the ESMF to acquire funds from the World Bank. Only after that projects will be developed and conducted the proper public consultation with a more representative sample. Thank you.

²² DPTADER stands for Provincial Directorate of Land, Environment and Rural Development

I – Augusto Paulo, technician at CMB:

In the particular case of Beira City I would like to suggest the inclusion in the project of the historical context of our city, number of population that benefits from water from FIPAG, population that demands water, water capability and volume of water that will be increased. It is hard to contribute in such a vague debate.

R – Juliana Come, Environmental Consultant:

Thank you Mr Augusto. How is the actual situation of water supply here?

I – Augusto Paulo, technician at FIPAG:

FIPAG is here represented and is the best entity to answer this question.

R – Milton Nhachengo, FIGAG Maputo:

We would like to know from the consumers. FIPAG answer might be biased. They can say that everything is fine. For example, were I am staying there was no water problems but I do not know it is always this way.

R– Beatriz Dias, technician at DPTADER

We should contribute so our inputs can be registered and be part of the document. This is our opportunity to have our concerns included in the program.

I – Fernando Marcolino, UP student:

Referring to EDM, there are many new peri-urban areas where coordination involving entities such as EDM, TDM, the municipality but FIPAG is always the last one providing water supply services. This creates constrains for the new residents of such areas and this problem should be addressed.

R – Juliana Come, Environmental Consultant:

Thank you for contribution.

I - Pedro Arone, professor at UP²³ Beira:

I am a resident of Macaringo suburb and I would say that the water supply there is intermittent, having some from 8 to 12 hours and then few houses benefit from water in the afternoons. The pressure is normally not good and often we get water from the taps outside our houses.

R – Juliana Come, Environmental Consultant:

Thank you. Your comment will be registered.

I – José Matos, EDM:

I suggest that FIPAG set particular meetings with public housing delegation and the municipality to discuss problems. We cannot talk freely about FIPAG problems when they are here represented. Beira city is growing fast and the projects should be structured including other components because water is not the only demanded service, such as electricity and road access for example.

R – Juliana Come, Environmental Consultant:

²³ UP stands for Pedagogic University.

Thank you for your contribution. In all situations discussed here recommended measures will be done according to the Mozambican legislation and the World Bank directives. I agree that structured projects could be better but they depend on the funding goals.

I – Beatriz Dias, technician at DPTADER:

Is the Dondo District here represented? I saw head of the district of Dondo complaining that they have water supply, electricity and land distributed but no one lives there. I suggest that this project establishes a partnership with the municipality because there are several occupied areas with no water supply or electricity.

R – Juliana Come, Environmental Consultant:

Thank you for your contribution.

R – José Matos, EDM:

Most of the projects are not structured and water supply and electricity is not enough. There is safety, schools for our children, clinics, stores and police stations. It is risky to move to Dondo when all public facilities are here.

Beatriz Dias, technician at DPTADER:

I agree with Mr Jose Matos. This should be proposed to the municipality.

Jose Matos, EDM:

This is not an appropriate forum to discuss this issue. This is related to the areas expansion areas planned by the municipality and has nothing to do with FIPAG and EDM. Such expansion depends of funding and the municipality urbanization plans.

I – Diogo Muquito, FIPAG:

With regard to the leakages and other piping problems, I would like to clarify that many piping installation is not made by FIPAG, we only do the monitoring. Beira is growing and if we look at the data, Maculumo and Inhamizua suburbs were created two years ago. The water distribution system was built in 1950. It was projected to supply a limited number of consumers. With the independence the number of residents in town increased but the system remained the same. Some people build their houses on existing piping. Many rehabilitation projects fail to conclude their work because they could not destroy houses to remove or rehabilitate the macaroon tubing, as for example in Munhava suburb. These issues should be analysed in deep to find a possible solution.

R – Juliana Come, Environmental Consultant:

Thank you for your contribution.

I – Matias Muromo, FIPAG:

WE had a project that goes until 2019 that aims to reduce leakage and replace macaroon tubing. We are aware that will be a challenging to remove in peri-urban areas.

R – Juliana Come, Environmental Consultant:

Thank you.

R – Diogo Muquito, FIPAG:

This water distribution system has 65 years and we need to rehabilitate and change the obsolete equipment. There is a project been implemented by the Dutch and intends to rehabilitate water systems and reservoirs. I suggest that the project does not rehabilitate

reservoirs but build new ones considering the demand and growth of the city. 4 – 5 years ago we used to have 10 thousand customers but now we have around 50 thousand customers. There are places with bad conditions for water supply but due to the pressure and demand FIPAG supply water and after few months they have problems.

R – Juliana Come, Environmental Consultant:

Thank you for your explanation.

Sérgio Matimbe, FIPAG:

I suggest that this project coordinates with local government the resettlement question. The construction in many areas in expansion was disorderly and should be better to resettle and ordinate in order to have a good water supply system.

Beatriz Dias, technician at DPTADER:

With the explanation of Mr Diogo I realized that FIPAG does not include the municipality on the planning. The municipality has to participate in such debates and be aware of the projects.

I – Diogo Muquito, FIPAG:

The municipality also has its own challenges. I attended a program from the municipality and they were applying for funding to build a hospital in Nhamanhabue (new suburb) and they never get.

Beatriz Dias, technician at DPTADER:

I was talking about the coordination between entities in existing areas and not the creation of new ones. The municipality should be included in discussions about existing zones with several problems such as Munhava.

I – Matias Muromo, FIPAG:

I attended a meeting about a water supply project that goes until 2019 and the municipality was represented. I do not know what happened here.

Augusto Paulo, CMB:

I suggest all participants to visit the municipality master plan and look at the territorial ordering. All plans about expansion are included there.

Beatriz Dias, technician at DPTADER

We would like to have an example of implementation of the plans stated in the master plan.

Augusto Paulo:

For example, we have the Languna zone where erosion problems were addressed by the municipality.

Beatriz Dias, technician at DPTADER:

FIPAG daily receives request of water in new areas. They cannot refuse to provide areas in zones that are not included in the plan. Another solution should be proposed otherwise FIPAG will have problems.

I - Augusto Paulo, environmental technician at CMB:

I would like to know if, due to the water cost, FIPAG cannot build water reservoirs.

R – Diogo Muquito, FIPAG:

The construction of water reservoirs requires funds.

R – Milton Nhachengo, FIPAG Maputo:

Please let focus on the objective of this meeting. As my colleague Diogo says, construction of new reservoirs requires funds and we are here discussion environmental and social impacts to prepare an ESMF in order to apply for funding from the World Bank. With this funding sub-projects will be implemented in the selected cities including Beira.

I – Sergio Matimbe, FIPAG:

This funding from the World Bank refers to resettlement. Was population survey undertaken for the people affected by the macaroon piping problem to ensure that the budget covers it? Was the municipality included in the process?

J – Juliana Come, environmental consultant:

The objective of this meeting is not to discuss the budget of the program but to identify environmental and social impacts of water supply projects. The discussion document that we provided to each participant refers approximately 180 million dollars to this program. This amount will be shared by this eight selected cities and projects will be designed based on this total.

R – José Matos, EDM:

As Ms Beatriz explained, the consultants did not mention that we have a project already. We are here to provide inputs to prepare the ESMF to submit to the World Bank in order to obtain funds to develop water supply projects. I would like to refer to an important aspect which is the viability of this project. It is important to provide contribution regarding quantity of water, contribution to agriculture, jobs, etc. It should be interesting to include population displacement, jobs, housing, etc. and mention inhabited zones with water supply and electricity services available. We should provide inputs to enrich the project and acquire the credit.

I - Beatriz Dias, technician at DPTADER:

I suggest a change in the aims of the program which are rehabilitation of existing systems and expansion to new areas to focus on new constructions of water distribution systems because the existing system has more than 60 years.

R –Juliana Come, Environmental Consultant:

Thank you.

I – Matias Muromo, FIPAG:

Rehabilitation is also important because we have around 220 km of obsolete piping waiting funds for rehabilitation in many suburbs such as Inhamizua, Mafarinha in Dondo, Mandruzo and 25 de Setembro.

I – Sérgio Matimbe, FIPAG:

I would like to suggest the consultants to learn about others existing projects being implemented otherwise water supply projects will be designed for same areas.

R – Juliana Come, Environmental Consultant:

Thank you. We refer to this project as WASIS II because WASIS I was developed and extended until October 2015. The Government realized that WASIS I would be concluded with several residual issues with many cities still to benefit from water supply services. In this context WASIS II was created and FIPAG is applying for funds to this project.

I - Fernando Marcolino, UP Student:

I have already been consulted on the objectives of the WASIS II Project to be carried out in the Canhandula area in Dondo, and from what I understood the objective is to supply water to five thousand households including other infrastructures, schools and clinics. I suggest that the funding for Beira is intergrated in this project and that water is also provide to Canhandula.

R – Matias Muromo, FIPAG:

Water supply in that area will depend on the Inhamizua system.

Completed the interventions Juliana Come mentioned the comments registration sheet and asked the participants to take with them, fill and send within a week to the address provided on it. The meeting ended at 11:00 hours.



**WATER SERVICES AND INSTITUTIONAL SUPPORT PROJECT (WASIS II) FOR
FIPAG
ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)
PRESENTATION**

MINUTE OF PUBLIC PARTICIPATION MEETING

17.5 NACALA CITY

Date: 27/05/2015

Place: Afrin Hotel Conference Room

Hora: 09:00 – 11:00

Participants: 6 participants

POWERPOINT PRESENTATION

The consultant Juliana Come, as the facilitator of the meeting, held opening of the session, introducing herself and asking the registration of each participant. After that she started presenting the objectives of the meeting that included: (i) inform on the need to create the environmental and social management framework for the water supply and institutional support (WASIS II) project; (ii) discuss potential environmental and social impacts for water supply projects; (iii) register other environmental and social impacts that were not anticipated.

Then, Juliana Come explained that the creation of the environmental and social management framework for the WASIS II project is a requirement of the World Bank to fund water supply projects in the selected cities. She listed the selected cities which include the city of Beira, Dondo, Chimoio, Gondola, Tete, Moatize, Nacala-City, and Pemba. She explained that the WASIS II project aims to improve the existing water transmission network, changing the obsolete pipeline in cement zone (urban area), as well as providing counters to new users, increasing the number of consumers of this service.

Juliana Come passed then to the explanation of the legal aspects of the WASIS II project where she described briefly the need to follow the World Bank Operational Policies (OP) in water supply projects funded by the World Bank. These policies include the OP 4.01 for

environmental assessment (regulates participation of the beneficiaries of projects, local government and non-governmental organizations in the public participation process); OP4.04 for natural habitats (regulates the protection, maintenance and rehabilitation of natural habitats); OP4.09 for pest management (relates to agriculture and public health); OP4.10 for indigenous people (land rights and use); OP4.11 for cultural heritage (sacred places, culture and values); OP4.12 for involuntary resettlement (displacement, compensation process); OP4.36 for forests (protection and rehabilitation); OP4.37 for safety of dams (related to water abstraction); OP7.50 for projects on international waterways (regulates procedures for international such as rivers and lakes); OP7.60 for projects in disputed areas (regulates coordination and agreements between different entities with interests and activities in the same area, e.g. water transmission main located at the same area as the optic cables of TDM²⁴ and passing through a paved road of ANE²⁵). She also made reference to the Mozambican legislation, citing the decree 42/2008 of 4 November which regulates the environmental impact assessment; the decree 130/2006 for public participation processes; and the water law 43/2008 of 30 October.

It followed the explanation of the objectives of the public participation process, the environmental situation of the country and the positive environmental and social impacts of the WASIS II project. She said that, in terms of benefits, the project will provide more coverage through the increase of the number of connections by a diverse number of users; more security in the access to clean water during the day; and an increase in business development possibilities in sectors and activities in which water supply is a critical factor. With regard to the negative impacts, Juliana Come presented the impacts that occur in different phases of water supply projects. She described seven phases namely: (1) water abstraction from river or lake; (2) water abstraction from wells field; (3) water abstraction pump station; (4) water treatment works; (5) water transmission main; (6) water reservoirs; (7) urban water distribution. The main impacts presented in these phases included water pollution on surface and groundwater sources; ecological issues; saline intrusion; climate change issues; resettlement and compensation; vandalism; conflicting land use and ownership; impacts on groundwater levels; diseases associated with stagnant water from leakages; public nuisance; and visual impacts.

Juliana Come ended the presentation referring to the increased efficiency of services provided in urban areas; increased coverage in peri-urban areas, reducing water leakages and strengthening the institutional and regulator water supply regional chains. She added that the preparation of the ESMF does not replace the EIA and that it is important in this phase to collect contributions of the participants in the meeting in order to anticipate, minimize and mitigate negative impacts. Then she invited the participants to the debate session.

ISSUES AND RESPONSES SESSION

Issues (I) and Responses (R):

I – Fenias Ndimande, EDM engineer:

What was the WASIS I about? What is the different between WASIS I and WASIS II?

This project will benefit many residents of Nacala-City as the situation here is bad. The city is growing fast and we need water, especially for the industries here established. What will be the water sources for Nacala?

R – Juliana Come, environmental consultant:

²⁴ TDM stands for Telecommunications of Mozambique.

²⁵ ANE stands for National Roads Administration.

Thank you for your question. First, regarding WASIS I and II it is used the same denomination because both are water services and institutional support projects but they have different objectives and aims. WASIS I was funded by the African Bank for Development and we are in the process to acquire funding for WASIS II from the World Bank. These projects focus different cities as well. WASIS is an abbreviation of water services and institutional support project. These projects the duration of five years and WASIS was extended to October 2015.

R – Milton Nhechengo, FIPAG Maputo:

Each project has its own package. Even if WASIS I and WASIS II benefit the same city, it will not address the same problem. WASIS I started in 2008 and was extended until 2015. The extension of WASIS I should be called WASIS II and this would be WASIS III but it was not considered as another project. The fact that FIPAG has to look at the industrial demand of Nacala-City it is important but this project intends to first benefit the citizens and not the industry.

This funding we are applying from the World Bank stated a specific credit and as the years passes the amount reduces.

I – Fenias Ndimande, EDM engineer:

Nacala-City is growing and we can show it on our commercial graphic. These projects should be defined with 10 years duration where during this time they would address all water supply projects.

R – Milton Nhechengo, FIPAG Maputo:

Our donor offered a specific amount and FIPAG have to share between other cities. This is what sometimes we apply for funding for other activities within the main funded project.

R – Juliana Come, Environmental Consultant:

This amount that the World Bank offered has to be planned within the ESMF. It is necessary to define what will be done in each city according to their needs.

I – Rajaque Vasco, Planning technician at SDEJT²⁶:

I would like to add an aspect. If the WASIS II project comes to Nacala-City, a real study should be conducted. We have few schools with water. The population is moving to peri-urban areas, trading their spaces due to the growth of the industry, with no water supply services. We hope that this project also benefits areas such as Mahalene and other areas outside the concrete zone. If this project focused only on the concrete zone it will fail to its purpose. It would be better if this meeting included participation of residents of these new areas.

R – Juliana Come, Environmental Consultant:

Thank you for your contribution.

I – Maria Judite Chilae, SDPI²⁷ technician:

As we are here talking about FIPAG I would like to ask FIPAG why they do not answer our requests. This is the third year that the SDPI is waiting for water supply.

R – Juliana Come, Environmental Consultant:

Although this is not the right forum but thank you for your question. I invite FIPAG to say something.

²⁶ SDEJT stands for District Services for Education, Youth and Technology

²⁷ SDPI stands District Services for Planning and Infrastructure.

R – Adriano Bata, FIPAG:

Unfortunately, at the moment I do not have information to answer but after the meeting I can provide my contact and find out about your request.

I would like to talk about a negative impact in our holes field. Our holes fields are artesian which mean that once opened they pull water two hours per day. This floods the crops of the population.

In my understanding the saline intrusion is more for underground water and not for rivers and lakes as referred in the presentation. Rivers and lakes normally just dry but we do not have cases of saline intrusion.

Regarding the water distribution, projects normally focus on water services expansion based on the existing system in urban areas and do not rehabilitate and increase this system. After a while both urban and peri-urban areas have water supply problems.

It is necessary look at the World Bank policies because there is one that prohibits the removal of existing piping in urban areas, also called fibre-concrete.

R – Juliana Come, Environmental Consultant:

Thank you for your contribution. This project intends to rehabilitate the obsolete piping and I am quite sure that some in urban areas will have to be removed due to this time. We will look at the World Bank document.

I – Robene Manuel, Health Nacala:

We are happy with this project. As other participants referred, Nacala has serious water supply problems. There is a need in improvement of quantity and quality of water. What is the prevision of the implementation of this project? What are the planned water sources?

R – Juliana Come, environmental consultant:

Thank you for your question. At the moment we have to submit the ESMF at the first day of June. We are finalizing these meetings, this is the last meeting and we conducted similar meetings in Tete, Moatize, Chimoio, Beira and Pemba. The World Bank will take its time to analyse and answer our request of funding.

R – Adriano Bata, FIPAG:

With regards to the water sources in Nacala, we have identified four holes camp, namely Mpaco, Mutuzi, Teteriane (close to Matibane and has three artesian holes), and the Nacala Dam that produces below its actual capability.

I – Robene Manuel, Health Nacala:

I heard that Nicandavale suburb also has a hole's camp. This hole I know but the quality of water is not good.

I – Juliana Come, environmental consultant:

Thank you for such a valuable contribution. I would like to know from FIPAG or the municipality if there is coordination between different sector or not? What were the main problems due to the lack of coordination?

I – Milton Nhachengo, FIPAG Maputo:

What would be the ideal methodology to EDM, TDM and FIPAG operates?

R – Fenias Ndimande, EDM Engineer:

These three institutions normally use same routes and an inter-sectorial coordination is important.

I – Robene Manuel, Directorate of Health Nacala:

I believe that these institutions have a planning and projects department and technicians of company should be in contact and share information. I would like to understand if the water in artesian holes is treated.

R – Adriano Bata, FIPAG:

I am wondering why you ask such thing. Is there a problem or it is just curiosity?

I – Robene Manuel, Directorate of Health Nacala:

No, no, just curiosity. Thank you.

Completed the interventions Juliana Come mentioned the comments registration sheet and asked the participants to take with them, fill and send within the weekend to the address provided in it. Then she invited Milton Nhachengo to say the last consideration. The meeting ended at 10:30 hours.



**WATER SERVICES AND INSTITUTIONAL SUPPORT PROJECT (WASIS II) FOR
FIPAG
ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)
PRESENTATION**

MINUTE OF PUBLIC PARTICIPATION MEETING

17.6 PEMBA CITY

Date: 25/05/2015

Place: Cruz Vermelha Conference Room

Hora: 09:00 – 11:00

Participants: 15 participants

POWERPOINT PRESENTATION

The consultant Juliana Come, as the facilitator of the meeting, held opening of the session, introducing herself and asking the registration of each participant. After that she started presenting the objectives of me meeting that included: (i) inform on the need to create the environmental and social management framework for the water supply and institutional support (WASIS II) project; (ii) discuss potential environmental and social impacts for water supply projects; (iii) register other environmental and social impacts that were not anticipated.

Then, Juliana Come explained that the creation of the environmental and social management framework for the WASIS II project is a requirement of the World Bank to fund water supply projects in the selected cities. She listed the selected cities which include Beira, Dondo, Chimoi, Gondola, Tete, Moatize, Nacala-City, and Pemba. She explained that the WASIS II project aims to improve the existing water transmission network, changing the obsolete pipeline in cement zone (urban area), as well as providing counters to new users, increasing the number of consumers of this service.

Juliana Come passed then to the explanation of the legal aspects of the WASIS II project where she described briefly the need to follow the World Bank Operational Policies (OP) in water supply projects funded by the World Bank. These policies include the OP 4.01 for environmental assessment (regulates participation of the beneficiaries of projects, local government and non-governmental organizations in the public participation process); OP4.04 for natural habitats (regulates the protection, maintenance and rehabilitation of natural habitats); OP4.09 for pest management (relates to agriculture and public health); OP4.10 for indigenous people (land rights and use); OP4.11 for cultural heritage (sacred places, culture and values); OP4.12 for involuntary resettlement (displacement, compensation process); OP4.36 for forests (protection and rehabilitation); OP4.37 for safety of dams (related to water abstraction); OP7.50 for projects on international waterways (regulates procedures for international such as rivers and lakes); OP7.60 for projects in disputed areas (regulates coordination and agreements between different entities with interests and activities in the same area, p.eg. water transmission main located at the same area as the optic cables of TDM²⁸ and passing through a paved road of ANE²⁹). She also made reference to the Mozambican legislation, citing the decree 42/2008 of 4 November which regulates the environmental impact assessment; the decree 130/2006 for public participation processes; and the water law 43/2008 of 30 October.

It followed the explanation of the objectives of the public participation process, the environmental situation of the country and the positive environmental and social impacts of the WASIS II project. She said that, in terms of benefits, the project will provide more coverage through the increase of the number of connections by a diverse number of users; more security in the access to clean water during the day; and an increase in business development possibilities in sectors and activities in which water supply is a critical factor. With regard to the negative impacts, Juliana Come presented the impacts that occur in different phases of water supply projects. She described seven phases namely: (1) water abstraction from river or lake; (2) water abstraction from wells field; (3) water abstraction pump station; (4) water treatment works; (5) water transmission main; (6) water reservoirs; (7) urban water distribution. The main impacts presented in these phases included water pollution on surface and groundwater sources; ecological issues; saline intrusion; climate change issues; resettlement and compensation; vandalism; conflicting land use and ownership; impacts on groundwater levels; diseases associated with stagnant water from leakages; public nuisance; and visual impacts.

Juliana Come ended the presentation referring to the increased efficiency of services provided in urban areas; increased coverage in peri-urban areas, reducing water leakages and strengthen the institutional and regulator water supply regional chain. She added that the preparation of the ESMF does not replace the EIA and that it is important in this phase to collect contributions

²⁸ TDM stands for Telecommunications of Mozambique.

²⁹ ANE is the National Roads Administration.

of the participants in the meeting in order to anticipate, minimize and mitigate negative impacts. Then she invited the participants to the debate session.

ISSUES AND RESPONSES SESSION

Issues (I) and Responses (R):

I – Atanásio Ambo, secretary at the city committee:

After this presentation I would like to share my doubts regarding the information presented here.

I learned that this meeting intends to present the ESMF³⁰ for the water services and institutional support project. Regarding the implementation of water supply projects, electricity provision and communications, I noticed that these sectors often need conduits that open paved roads and destroy infrastructures. Another problem is that most of such projects do not consider expansion which is always necessary. Reserved conduits could minimize the impacts of roads destruction and soils movement. As an example, we have roads recently rehabilitated but we know that soon another project will come and destroy our roads. When presenting negative impacts, I did not see destruction of roads and infrastructures nor mitigation measures.

Another thing is the lack of redundancy in our projects. Currently we have a small water system in Metunge that is supplying some zones but if opportunity for a bigger system comes, the existing will be destroyed rather than expanded. There is also the political impact to be considered which refers to the population against Government due to bad services provided.

R – Juliana Come, Environmental Consultant:

Thank you for your contribution. Your contribution will be considered.

I – Ângelo Francisco, DPTADER Technician:

During your presentation I saw some aspects on an EIA. I would like to know if EIA will be conducted for each project.

R – Juliana Come, Environmental Consultant:

This identification of environmental and social impacts at this stage is required by the World Bank. They do not want to fund a project that has critical negative impacts. When the World Bank approve this program and we develop sub-project these impacts will be considered.

I – Ângelo Francisco, DPTADER technician:

Can we call this a preliminary evaluation?

R - Juliana Come, Environmental Consultant:

Yes but only in practical terms and for the identification of impacts.

I - Atanásio Ambo, secretary at the City Committee:

Recently we had a water supply project from Millennium Challenge Account (MCA) and we attend public consultation meetings for this project and after that nothing happened. Have you consulted this project?

³⁰ Environmental and Social Management Framework.

R – Juliana Come, Environmental Consultant:

This program is being conducted by FIPAG but is owned by the Government of Mozambique. The MCA might have funding for some projects. When we conduct an EIA it does not mean that we have a project already but that there is an intention to implement the project and studies are being conducted in order to identify positive and negative impacts of the project. The EIA study is submitted to the Ministry of land, environment and rural development for approval and only after that the project is implemented. Sometimes, depending on the specifications of projects they are not approved.

I - Atanásio Ambo, secretary at the City Committee:

My main constraint was the expectation created to the participants. Around 100 people attended to that meeting and they participated actively and nothing happened. Now when people are invited to projects they do not comment as they are losing hope.

R – Juliana Come, Environmental Consultant:

The problem is that when consultants want contributions and participants participating actively they often do not clarify that the study intends to provide a project. They say affirmatively there a project will be developed in the area which motivates people to contribute. Raised expectations are a critical problem. Few years ago during an EIA study I went to a community to present a project what would create several benefits for them including jobs. The project was not approved and after a while another company decided to develop a business close to this area. We, as consultants had to go to the same community and present another project. They refused to contribute to the second project as they were waiting implementation of the first one that could bring more benefits.

I – Ângelo Francisco, DPTADER technician:

It is important to look at the quality of water supplied. Aside from the problems for water supply quality is also an issue in Pemba. Does this water follows the WHO³¹ standards for human consume?

In terms of variables included on chemical analyses, was it analysed the substances in our water?

I am asking this because few months ago I went to the doctor and he told me that the water we consume has problems.

R – Juliana Come, Environmental Consultant:

Thank you very much. I would like to invite FIPAG to clarify this doubt.

I – Ângelo Francisco, DPTADER technician:

This is a concern for us because the project intends to expand the water supply to new consumers and this increases the quantity of water supplied and it is important to ensure quality as well.

I – Atanásio Ambo, secretary at the City Committee:

This is also my concern and I would like to add that besides the chemical products used for water treatment we are recommended to use CERTEZA. I wonder if was conducted already a survey to learn if this chemical mixture is safe for the human health.

R – Ângelo Francisco, DPTADER technician:

³¹ World Health Organization.

With regard to the use of CERTEZA, it is more to eliminate the micro-organisms that might provide diarrheic diseases. For example, we in a river we have multiusers and some actions might contaminate the water. Same might happen with underground water as the river is an aquifer as well. Another fact, for example, I have a water tank and water bomb at my house. Once a week I have to clean the deposit due to the quantity of sediments deposited in the tank. I imagine how the ones that access water directly from their taps live. This proves that the quality of water is not good. I believe that in Maputo things are different but I am quite sure that here the water is not analysed.

I – Martinho Uacala, technician at Tecnica:

I would like to know if we have a water treatment station for Pemba. We have serious water problems and we do not know about FIPAG policies. We only access water from 5 to 6 o'clock and we often see trucks with water. This is a water management problem. We are forced to purchase water from the trucks when we pay FIPAG for water supply. The trucks should collect water at the end of the day to avoid restrictions for us.

R – Silvio Machachane, FIPAG:

I am here representing FIPAG and I am aware of your concerns. We access underground water in Metunge through holes and the water treatment station is there. It is true that the water in each city is different and the water treatment also differs according to the type of water in each city. Our station is prepared for the water conditions here which has high quantity of steel. In order to treat our water we reduce steel through a process called aeration and after that we include chlorine. Our major challenge is the transport of water. Our machinery is old and we have problems with water bombs. Last year we opened more holes in Chuiba but it is not solving our demand problems and we need a new water transmission main due to the growing of the city.

With respect to water quality, we believe that because we do not have water in the piping constantly, dust and other waste might accumulate in the tubes and when the water comes we have turbid water in our taps. I am not a laboratory technician but I see how the process is done.

Our tables are based on the international regulation and our water is within the normal standards. I would like to know from Mr Angelo the exact substance that he was talking about.

We would like to know from the participants other problems to help us improving. We have water transport problems; obsolete piping; we need 60 km water transmission main and this project and these meetings will help us designing solutions to improve.

I – Martinho Uatala, technician technician at Tecnica:

Adding, I believe that your explanation about the turbid water is not a valid answer to my question. I think that it is a water management problem that your colleagues in the water quality department do not know how to address or are not capable of it. A water treatment has four phases before the water reaches our houses. It is important to pay attention to this fact. You referred that the water we consume has chlorine but we do not know the quantity of chlorine that FIPAG use. We use CERTEZA that also includes chlorine and we do not know if will create problems.

Another question, we have to ensure that institutions such as EDM and TDM coordinate to avoid constraints for us.

R – Juliana Come, Environmental Consultant:

Thank you.

R – Ângelo Francisco, DPTADER technician:

The municipality have to be included in the coordination with these institutions. EIA should foresee these cases and recommend measures for multiuse areas.

R – Milton Nhachengo, FIPAG:

With regard to this question, we invited the municipality and entities that operates in the underground to coordinate.

I – Martinho Uacala, technician at Técnica:

I am sure that the invitations were not directed. I am here representing the Técnica because we saw the advert in the newspaper. FIPAG should invite institutions with letters and announce this meeting on the Radio as well.

R – Juliana Come, Environmental Consultant:

Thank you. The meeting was planned in Maputo and we send the invitation letter and send to the delegates of FIPAG in centre and north region. We had 33 participants attending the meeting in Moatize and depend on the dynamism of each delegate.

I – Adelino Savelo, Secretary of the Caricio suburb:

I would like to understand what was done in WASIS I, what happen and why we are applying for WASIS II. We should not be here discussing impacts only for funding purposes but also to understand the real impacts and concerns of the citizens of Pemba. Is the water enough for us?

The project that you are presenting here will help FIPAG or the name of FIPAG will change to WASIS II?

R – Juliana Come, Environmental Consultant:

Thank you for your contribution. We did not refer WASIS I because these are different programs. The ESMF is a new program and WASIS I is currently being implemented in selected cities and was funded by the African Development Bank. WASIS II has the same name because it is also a water services and institutional support project but as we are applying to a different funder we have to follow the World Bank requirements and the elaboration of the ESMF is one of their requirements. We did not mention WASIS I because they are different programs and have different objectives.

R – Milton Nhachengo, FIPAG Maputo:

WASIS I was only Centre and North, initiated in 2008 and with extension until October 2015. FIPAG is a continuing process but the ESMF is new. This project is a FIPAG project when WASIS is only the funding of the project. We do not know exactly why Pemba was included and the real reason for the inclusion of the selected cities aside from the growing of the city and demand for water. Some cities will benefit from rehabilitation and construction but some cities will have only rehabilitation.

R – Silvio Machachane, FIPAG:

As referred my colleague, FIPAG will not change the name, this is just a funding process. In Pemba we often talk about Chinese piping, This piping was installed during WASIS I which was funded by the African Bank for Development³².

³² African Development Bank.

R – Martinho Uacala, technician at Técnica:

Just to add that we had a water supply project called 7 cities and Mocimboa da Praia, Nacala and Quelimane also benefited from it.

R – Silvio Machachane, FIPAG:

It is also important to focus on the institutional coordination. This might create constraints to the residents in Pemba. We have faced challenges with ANE destroying our piping due to the lack of communication.

R – Milton Nhachengo, FIPAG Maputo:

In Xai-Xai (Maputo) we had an accident with the optic fibre of TDM and since that we had to work in coordination with them to avoid these situations.

R – Ângelo Francisco, DPTADER technician:

At the end of this process and after the elaboration of the ESMF, will the report be available for consultation?

R – Milton Nhachengo, FIPAG Maputo:

Normally these reports are uploaded on the World Bank webpage but I do not think this one will be a public domain. If the World Bank decided to share the report, it will be available in English.

R – Juliana Come, environmental consultant:

Thank you for all the contributions.

Completed the interventions Juliana Come mentioned the comments registration sheet and asked the participants to take with them, fill and send within a week to the address provided in it. The meeting ended at 11:00 hours.

REUNIÃO DE CONSULTA PÚBLICA DO PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)
 QUADRO DE POLÍTICAS DE GESTÃO AMBIENTAL E SOCIAL
 FOLHA DE REGISTO DE PARTICIPANTES

DATA DA REUNIÃO: 20 de Maio de 2015 PROVÍNCIA: Manica, Município de Chimoio
 LOCAL DA REUNIÃO: Sala Vermelha, Hotel Inter Chimoio PARTICIPANTES: 6 participantes

INSTITUIÇÃO	NOME DO PARTICIPANTE	POSIÇÃO	TELEFONE	E-MAIL
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REUNIÃO DE CONSULTA PÚBLICA DO PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)
 QUADRO DE POLÍTICAS DE GESTÃO AMBIENTAL E SOCIAL
 FOLHA DE REGISTO DE PARTICIPANTES

DATA DA REUNIÃO: 27 de Maio de 2015 PROVÍNCIA: Nampula, Cidade de Nacala
 LOCAL DA REUNIÃO: Hotel Afim PARTICIPANTES: 6 participantes

INSTITUIÇÃO	NOME DO PARTICIPANTE	POSIÇÃO	TELEFONE	E-MAIL
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Saúde Nacala/SDS	Robene Manuel	Saúde Comunitária	825269992	robmanuel78@gmail.com
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REUNIÃO DE CONSULTA PÚBLICA DO PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)
 QUADRO DE POLÍTICAS DE GESTÃO AMBIENTAL E SOCIAL
 FOLHA DE REGISTO DE PARTICIPANTES

DATA DA REUNIÃO: 25 de Maio de 2015 PROVINCIA: Edo Delgado, Pemba
 LOCAL DA REUNIÃO: Salal Gug Vermelha PARTICIPANTES: 15 participantes

INSTITUIÇÃO	NOME DO PARTICIPANTE	POSIÇÃO	TELEFONE	E-MAIL
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Dante Natté	Revelio A. P.	Secret. 13.	8227791240	

REUNIÃO DE CONSULTA PÚBLICA DO PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)
 QUADRO DE POLÍTICAS DE GESTÃO AMBIENTAL E SOCIAL
 FOLHA DE REGISTO DE PARTICIPANTES

DATA DA REUNIÃO: 18 de Maio de 2015 PROVÍNCIA: TETE
 LOCAL DA REUNIÃO: Tete, Hotel Zambéze PARTICIPANTES: 15 participantes

INSTITUIÇÃO	NOME DO PARTICIPANTE	POSIÇÃO	TELEFONE	E-MAIL
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Alf Lindke					
Umwelt der Arbeitsstelle	Arbeitskreis Arbeitsmittel	Paul F. Isard	da	92472974	
Wald		Umwelt			
Frag, Sede	Milton Always	Te. ph. 111	8496	1183	per mhaschuy@fig. com

18 APPENDIX 2 - PUBLIC CONSULTATION MEETINGS MINUTES (2018)



REPUBLIC OF MOZAMBIQUE

MINISTRY OF PUBLIC WORKS, HOUSING AND WATER RESOURCES INVESTMENT FUND AND WATER SUPPLY ASSET (FIPAG)

WATER SUPPLY AND INSTITUTIONAL SUPPORT PROJECT (WASIS II)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

MINUTES OF THE PUBLIC CONSULTATION MEETING

Site	Date
Barragem Administrative Post of (Primary School-EPC)	15/11/2018
Nacala City city (Tamole Lodge)	16/11/2018

Introduction

The Public Consultation Meeting took place from 14h-16h on November 15, 2018, at the Barragem primary school (EPC), in Barragem Administrative Post, Nacala-a-Velha District and on November 16, 2018, from 9 -11 AM at Tamole Lodge, in the city of Nacala Port. The meeting was concerning the review of Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) under the additional funding for the Water Supply and Institutional Support Project (WASIS II). The objectives of the consultation were to:

- Inform the public about WASIS II and the need for developing ESMF and RPF in the context of additional funding to Nacala city;
- Disseminate the outline of the environmental and social safeguards instruments guiding WASIS II (ESMF and RPF);
- Gathering contributions from stakeholders, affected/interested people to enhance these instruments.

The documents will guide the formulation of EIA / ESMP and RAPs.

A total of 134 people attended the public consultation meetings as displayed in the table below:

Site	Number of Participants
Barragem Administrative Post, Nacala-a-Velha district	120
Nacala city	14
Total	134

The Consultant presented the ESMF and RPF instruments for WASIS II review, following the structure as stated below:

- Objectives of the meeting;
- WASIS II Project overview;
- Current Nacala City Water Supply System;
- Water infrastructures covered by Additional Financing;
- Projects initiated under the MCA;
- Description of Areas covered by additional funding;
- Potential positive and negative impacts of the project;
- The objectives of the ESMF and the RPF;
- Legal Framework; and
- Potential Environmental Impacts.

After the Presentation, the Nacala Director of FIPAG took the floor to explain that the water supply project is well-known at Barragem Administrative Post and Nacala area in general as it was initiated with Millennium Challenge Account (MCA) and then stopped. He expressed a great satisfaction for the good news according to which the water supply project to Nacala will be reactivated and this time it is really to be completed. He added that there is sufficient water in the Dam, however the city and its surroundings remain without drinking water. This is a unique opportunity for both people of Nacala and business to get access to clean water and at this time nothing will fail.

The table below presents the questions/contributions made by the participants in each site as well as the answers/comments from the consultants.

District: Nacala-a-Velha

Date: 15/11/18

Site: Barragem Primary School (EPC), Barragem Administrative Post, Nacala-a-Velha District

Participants: See the attached list of participants

Summary of questions and discussions

I&AP	Comments/Question	Answer	Response by
Juma Talmino	<p>Started by welcoming the water project to Nacala. Then he explained that the previous project opened a temporary access road. The population on the right side of the opened road did not receive any compensation for the lost crops and trees. Compensations were only paid to people losing their goods in the left side of the road. At the end of the meeting a list of 109 people was presented to FIPAG officials and to the consultants. He explained that the local community was informed that the missing compensations will be paid by the next contractor as the project starts since the water transmission main has been installed.</p> <p>The displayed list by the claimants was signed at Barragem Administrative Post level and it dated November 2013, after the suspension of MCA compact. The claimants admitted they did not share their concern with the District Resettlement Committee, created under MCA compact.</p>	<p>Mr Malauene (the consultant) questioned the lack of communication of this group with the Nacala-a-Velha district government. He nevertheless recommended the group to interact with the district government since the current resettlement supervision commission was established under the MCA compact and may have something to say about the water project's negative impacts. Malauene also clarified that according to SDAE people contacted before the public meeting, the affected MCA project's affected people have been fully compensated and the process was supervised by the District Resettlement Commission. He recommended FIPAG to undertake investigations in a timely and transparent manner so as not to affect the start of the new phase.</p> <p>Macuácuá explained that by the national law any compensation must be paid before the removal of the affected goods. Once the goods have been removed it will always be challenging to prove that the listed goods have been in fact affected or have not been compensated.</p>	David Malauene

I&AP	Comments/Question	Answer	Response by
Shabade Salimo	<p>He thanked the return of the water Project, adding that the Public Consultation meeting is signalling good promises.</p> <p>The water project should preferable hire local labour, especially women who can do the cleaning job, he recommended.</p> <p>In resettlement projects, land tittle (DUAT) is always easily attributed to resettled people. However, MCA Compact did not assign any DUAT to the affected people. He added that they would be grateful if the second project's phase consider assigning DUATs to the resettled people.</p> <p>The project should also consider supplying water to the local community currently unserved, especially the population of Muereque area which is located 3 km upstream the dam.</p>	<p>Macuácu explained that there is usually a public tender for hiring contractors who are enforced to comply with the EMP that will be developed based on this ESMF, which place precedence for hiring local labour. What is most important is the contractors to publish the existing vacancies and candidate profiles even if they are at the local level it is important for the sake of transparency during recruitment. Resettlement supervision commissions to be established under this project should also be responsible for overseeing the implementation of social issues including the creation of local jobs.</p> <p>The new resettlement legislation in force recommends the transfer of new land with DUAT. Land title can be attributed whenever necessary as longer as the land is available.</p> <p>The project includes the construction of a 400 m3 water reservoir next to the Future Treatment Plant at Barragem area, in order to benefit with clean water to local community. The most needy neighbourhoods should be prioritized in the distribution of clean water under this project.</p>	Eduardo Macuácu
Daniel Selemene	Local manpower should be employed. The previous project (MCA Compact) did not employ local labour.	<p>The local community will be privileged in the process of supplying manpower to the water project. The contractor must comply with FIPAG requirements, including the EMP that specifies the need for local staffing recruitment. Of course, it will not recruit the entire local workforce.</p> <p>Malauene added that the current water project will not have the same contracting capacity as did the MCA compact.</p>	Eduardo Macuácu and David Malauene
Sr. Carlos Naquidi, Camponês	The dam is old as it was built in 1975. It is quite large, but in the region, there is only one public water source where the community must pay 20 Mts for accessing drinking water. We appreciate better access to the water as was said.	Comment noted and thank you.	Eduardo Macuácu

I&AP	Comments/Question	Answer	Response by
Belito Felix, Youth Secretariat (OJM).	<p>He congratulated the water project and wished it would be better than the previous one which did not go to the end. The community is in need for drinking water.</p> <p>In the previous project the collection of documents for employment application was not done by the Government. It was done by the contractor. This time we would like to see involvement of the local government authority in the recruitment of local labour.</p>	Recommendation noted and will be considered in the report.	Eduardo Macuácuá
Manarino da Luz, responsible for the local Health center	The project intends to transport water to Nacala City. However, Nahavala that is just 7-12 km away from the Dam has no drinking water. Could you please include this neighbourhood in your water distribution plan?	We have recorded the name of the site so that FIPAG as the project proponent evaluate and take a decision about supplying water to this neighbourhood.	Eduardo Macuácuá

I&AP	Comments/Question	Answer	Response by
Génito Assane	Water kind of compensations is entitled to someone losing goods due to the water project? Cash or non-cash compensation?	<p>The national legislation recommends that the compensation should be in kind. However, the beneficiary may choose to receive cash compensation instead of non-cash compensation. If cash compensation is the preference of the affected people, then he/she must present a reason why cash compensation is demanded. So, our answer would be the type of compensation will be subject to case-by-case analysis and it will also consider the type of loss as well as the preferences of the affected people, etc.</p> <p>In the case of losing a house, compensation in kind is recommended so as to avoid misuse of the amount in acquiring goods rather than building a new house (e.g. purchase of motorcycle). Losing goods such as crops and fruit trees that generate incomes, cash compensation is recommended.</p> <p>Trees replenishment program should be implemented in parallel through the distribution of seedlings to the affected families</p>	Eduardo Macuácuá And David Malauene
Soares Ali Francisco, Resident at Barragem headquarter	What is the starting date of the project? How will houses damaged by machine vibration be handled? As much as we see, local houses are precarious and take no pillars in their construction structure.	<p>The project starting date has not yet been defined. It may take some while. At this stage preparatory documents (RPF and ESMF) are underway in order to secure funding. Supervising engineer will monitor the implementation of the EMP. If any house is affected by vibrations the contractor has the responsibility to repair</p>	David Malauene. And Eduardo Macuácuá
Pacre Teteco Omar, local resident	The MCA compact built a new bridge which as no lighting along it. The previous one was fully illuminated. Troublemakers take advantage of the darkness to commit criminal acts. Would this project address this problem?	We took note and the matter will be forwarded to FIPAG, infrastructure manager, for proper analysis and correction.	Eduardo Macuácuá

I&AP	Comments/Question	Answer	Response by
Eduardo Macuácuá	<p>At the end of the meeting, the Consultant thanked all the participants for their presence and valuable contributions. He said that this was one of several meetings that will be organized until the project become a reality. It called for the participation of the institutions, affected and interested people in the project meetings.</p> <p>The consultant made available his contacts so that any additional comments and contributions would be forwarded for consideration in the document under preparation.</p> <p>In the end the Consultant invited all the participants for refreshment.</p>		

Photographs taken during the Public Meeting at the EPC of Barragem



City: Nacala City

Date: 16/11/18

Local: Thamole Lodge, Nacala City

Participants: See the list of participants

Summary of discussed issues

PI&A	Comments/Questions	Answers	Response by
Buque – Citys do Norte	<p>Nacala always faced water supply shortage. However, I am concerned about the low turnout for this meeting. The Project's relevant impacts are well identified by the consultants and others may be identified during the implementation phase. Hence, he added that Erosion is a topographical problem of the city and deserves more attention.</p> <p>Once the ditches have been opened for the installation of water pipes, care must always be taken to cover the furrows and replace the soil, otherwise it will cause erosion to the project.</p> <p>It is important that the resettlement committee is active in order to prevent the resettled and compensated people from returning to the infrastructure protection areas.</p> <p>It is necessary to clearly identify the Project right of way so that the potentially affected communities/business are not caught in surprise, without any preparation.</p> <p>Otherwise the project is welcome. FIPAG is to be congratulated.</p>	<p>The meeting was publicized in the national gazette (Jornal Notícias) and additionally invitation letters were delivered to the key institutions. The meeting held on November 15, 2018 (the previous day) at the Barragem Administrative Post was attended by more than 100 participants.</p> <p>The level of interest to attend public meetings in urban areas has been decreasing, which probably explain the low turnout in this meeting.</p> <p>We took note of the comments and suggestions made, we will consider them in the final report.</p>	Eduardo Macuácu And David Malauene

PI&A	Comments/Questions	Answers	Response by
Adelino Cobre-Nacala Municipality	<p>In the Dam area a water reservoir will be built to serve the surrounding communities and this is very important.</p> <p>Between EB1 and EB2 is there provision of water supply to the local communities? This interval, in the near future, will be densely populated, being it a municipal expansion zone. The area around the EN712 Road, which links Nacala-a-Velha, there are already many people.</p> <p>In addition to using workers who can manage to swim during the construction of the pumping station, we suggest that small barges (motor or canoes) be acquired and used for rescue in case of an incident.</p> <p>With regard to medical care (first aid) there has been a lack of appropriate medicines that have to do with local diseases. For example where the water transmission main will be installed, there are risks of snake bites and snake venom antidotes availability is mandatory.</p>	<p>The location of the water treatment plant near the water source aims to benefit the local communities living throughout the right of way . Although engineering drawings are not yet available, we believe that the water project will consider "off-take" to transmit water to Nacala Velha and future needs for the expansion and industrial zones. This requires greater interaction / coordination of institutions at all project development phases.</p> <p>With regard to health, it is in fact concerned about the first aid services and not really a health post. Research will be done on the most likely diseases and risks, including those of biting stray dogs and snakes.</p> <p>Notes on comments and suggestions have been taken and will be considered in the report.</p>	Eduardo Macuácuá
Rufino Trinta-EDM Maintenance Area	<p>We have several ongoing projects aiming to produce and transport water, which can bring marvels to the city. However, at the moment there are neighbourhoods in the center of Nacala city facing serious water shortage. The problem is caused by the deficiencies or insufficiency of the water distribution network. Does the planned water project include the expansion of water distribution network in addition to investments in the water production and transmission main?</p>	<p>The water project includes the construction of 150 km of water distribution network for the old and new neighbourhoods.</p> <p>Additionally, there will be 12 km of primary distribution network to the industrial zone at the entrance of Nacala city.</p>	Eduardo Macuácuá And David Malauene
Allia-Nacala Municipality	<p>Regarding the drainage of rainfall waters, the final destination should be treated in a way that is not a problem for the communities living nearby.</p>	<p>Thanks, the comment and suggestions will be considered in the report.</p>	Eduardo Macuácuá

PI&A	Comments/Questions	Answers	Response by
Samarés- SDAE Nacala City	<p>He recommended the hiring of local workforce, so that the community get involved and hence support the water project.</p> <p>Asked if the project would consider the construction of a landfill for disposal of trash that will be generated by the water project?</p>	<p>Tenders are usually launched for the engagement of contractors who should have clear labour selection criteria, not with the aim of limiting the employability of local staff, but for the sake of transparency in selection as the vacancies may be limited in relation to the labour supply</p> <p>Our experience shows that Landfill involves high costs that cannot be supported by the water project. It is recommended the implementation of a sound waste management plan.</p>	Eduardo Macuácuá
Eduardo Macuácuá	<p>At the end of the meeting, the Consultant thanked all participants for their presence and contributions. He added that the public meeting is one of several meetings that will be organized until the project is implemented. He called for the participation of the institutions, people and communities affected / beneficiaries.</p> <p>Personal consultant's contacts were made available to the participants in the public meeting so that additional inputs could be delivered for consideration in the document under preparation.</p> <p>At the end, the consultant thanked participants and invited them for refreshment.</p>		

Photographs taken during the Public Meeting held in Nacala City





PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de Presenças em Reunião Pública

Local NACALA PORTO, H. Thamale

Data 15-11-2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
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PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de Presenças em Reunião Pública

Local NACAZA PORTO H. Tlaumale

Data 15-11-2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
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PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de pessoas consultadas

Local Nacala Porto e Nacala-A-Velha

Data 13 - 11 2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
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PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento






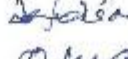


Lista de Presenças em Reunião Pública

Local P.A. da Barragem

Data 14-11-2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
01	Maiate Ali Sinyete	Educação	Professor	844030193	
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05	Magito Pedro	Saúde	APC	261585316	
06	AVELINO SEVERINO			841879036	
07	ASSANE ASSUMANE			760173063	
08	Daniel Jomil				
09	MARQUINA AMADE				
10	ESTRETO MUSE				
11	Mosé Ali			844725540	
12	Ali Francisco				

Reunião Pública - P.A. da Barragem
 WASIS II, 14 Nov. de 2018

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Ezene/Robson	862408972	
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ida Mariana	844381604	
mar Alí	845610763	
WÍONIO AGOSTINHO	846827280	
Aide Gabriel		



PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de Presenças em Reunião Pública

Local P.A. da Barragem

Data 14-11-2018

Nº	DMA R	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
25		AFILTO Sacuate	ARA		845643630	
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27		Paulo Afonso			250105011	
28		Fagundes Antonio Shi			84570512	
29		MUGGO Joao			875987029	
30		Diamond Moto				
31		Martinho Manuel Araújo			843642231 Técnico	843642231
32		Francisco Manuel A			84710004 pedreiro	84710004
33		Gasti Antonio				
34		ARMADA LURCO			847465500	
35		Ali Nahirabano			874385264	
36		Francisco João Mulhameu				

Anatércia Francisco - Seralheiro - 84710004
- Glória Armando - Serrante
Virgílio Manuel Araújo - Farcuro - 844618947
Calisto Manuel Araújo - Serrante - 84710004
Artur Branamada - Canalizador - 846910399
Martinho (Mário) Manuel Araújo - Função Técnico de Segurança - 845642231
Mussaq Toloh Al 846391751
Cipriano Branamada

Reunião Pública

P. A. da Barragem, 14 de Novembro de 2018, WASIS II

PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de pessoas consultadas

Local Nacala Norte e P.A. da Barragem

Data 13 de 14 - 11 2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
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	Satima Abdala			840128591	Satima Abdala
	Felizardo Madal	-	-	850222233	Felizardo
	Ali Tanojahi	-	-	846337135	Ali tanojahi
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	João Alameda	-	-		João Alameda
	Paulo Valença	-	COLABORADOR	848252479	Paulo Valença
	CARLITO ANTONIO	-	-	848252479	CARLITO ANTONIO

PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de Presenças em Reunião Pública

Local P.A. da Barragem

Data 14-11-2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
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39	Tina Munli Vane		Camponesa		
40	Alberto Antonio			846040616	
41	Ali Auroci				
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45	Ali Abdah	EP da Barragem	Campones	840224487	
46	Francisco Ramos/Araújo	Domestico	campones	849240006	
47	JELIX MUALIMO Eudivindima	Domestico	campones	847180709	
48	Jusaba Abacar	domestico	campones	846827360	

colites Antonio Viagem
empresas 866654287

Manuel Pasente Mutange Domestico Camponês 849363096

Reunião Pública

P.A. da Barragem, 14 de Novembro de 2018, WASIS II

PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de pessoas consultadas

Local P.A. da Barragem

Data 14-11-2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
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3	Abelino M. Adelo	PRM	chefe do polop.	84257214	
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5	Margarina Fernandes	Curso de Saúde (SAOMAS)	responsável do Curso de Saúde	849183667	
6	Marcos Lourenço Abreu Funde	Escola	Professor	847884583	
	Alícia Almeida				
	Francisco João Cunha				
	ANTUNES Juma	NOTARIADO	Escrivão	861346902	
	Pompeu Manuel				
	AZIZA Muanjo				

PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de Presenças em Reunião Pública

Local P.A. da Barragem

Data 14 - 11 - 2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
13	Gaidate Alfredo			84 4905157	
14	Agostinho Antonio			84 6040616	
15	Albino Joaquin			86 9722930	
16	ARMAS FELLESO			817019648	
17	LAURELITA NAZARETH				
18	Jacaria TAVATO				
19	VALDIR FERREIRO			84 8780949	
20	Marrudo RENE		Servente		
21	Martinho Manuel Araujo		Tecnico de Soc	84 364223	84 3642231
22	Chelue Marrudo		Camponês		
23	EVARISIO ALCANTARA		Camponês		
24	Saguimilagui				

PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de Presenças em Reunião Pública

Local EPC da Barragem, no P.A. da Barragem

Data 14 - 11 - 2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
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3	Amílcar Marcelino	FIPAG	879422775	892454719	
4	Alexander Getano				
5	malde			86645277	
6	Carista Massiala				
7	ANA TAMIARA		877606812		
8	Carlos Lima		Electricista	866744012	
9	ELIDA castro		84258268		
10	INICHAND ALBERTO			841875437	INICHAND ALBERTO
11	Uzrene Davido		Motorista	845121924	Uzrene Davido
	Paulo André		carbone	865419700	Paulo André

PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de Presenças em Reunião Pública

Local EPC da Barragem e P.Barragem Macala Velha

Data 14-11-2018

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
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	Natalito Paulino	II	Campones	8644123350	Natalito Paulino
	Hermínio Abalok				
	BCLHEHEMENDOSO		B48	848106156	
	Musa Afito		Campones	846848104	
	João Baptista Mungu	II	Lider	842916403	
	Dimitro Davares	SEI	CS	842514023	José Manuel
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PROJECTO DE ABASTECIMENTO DE ÁGUA E APOIO INSTITUCIONAL (WASIS II)

Quadro de Políticas de Gestão Ambiental e Social

Quadro de Política de Reassentamento

Lista de pessoas consultadas

Local *Reunión Pública - EPC da Barragem*

Data *14 - NOV - 2018*

Nº	NOME	INSTITUIÇÃO	FUNÇÃO	TELEMÓVEL	E-MAIL
01	<i>Aliane Lopes</i>	<i>Educação</i>	<i>Professor</i>	<i>846989474</i>	
02	<i>Joana Artur</i>	<i>Educação</i>	<i>Professora</i>	<i>845594437</i>	
03	<i>João Omar</i>	<i>EP/2.25 de S. João</i>	<i>Professor</i>	<i>845032490</i>	<i>joao@mariposa@gmail.com</i>
04	<i>Luiza António</i>		<i>Doméstica</i>		
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	<i>Maria Herménia</i>		<i>Doméstica</i>		
	<i>Alina João</i>		<i>Doméstica</i>		
	<i>Luís Alberto</i>				<i>João Alameda</i>
	<i>Fredyberto Constantino</i>		<i>Petaleiro</i>	<i>845570980</i>	
	<i>Isabelda Alberto</i>				
	<i>Luís Carlos</i>				
	<i>Margarida da Costa</i>				

19 APPENDIX 2: MITADER PRE-ASSESSMENT FORM (“FICHA DE PRE-AVALIAÇÃO”)

Environmental Information for Project Development

1 Name of project:

2 Type of activities:

- a) Tourism : -----
- b) Industrial : -----
- c) Agricultural: -----
- d) Other : -----
specify: -----

3 Identification of components: : -----

4 Contact: -----

5 Location of activities:

5.1 Administrative Localization (town, city, district, province, geographical position)

5.2 Insertion: (Urban – Rural)

6 Zoning:

Residential : -----

Industrial : -----

Services : -----

Parks/gardens: -----

7 Description of activities

7.1 Infrastructures and dimensions (attach map, etc.) : -----

7.2 Associated activities:-----

7.3 Short description of technology operation:-----

7.4 Principal and complementary activities:-----

7.5 Type, origin and number of workers: -----

7.6 Type, origin and quantity of primary material: -----

7.7 Chemical product proposed of use -----

7.8 Type, origin and quantity of water and energy resource: -----

7.9 Type, origin and quantity of combustibles and oils proposed to use: primary material: -----

7.10 Other necessary resources : -----

8 Land ownership (legal situation, owners, modality of acquiring, etc.) : -----

9 Alternatives for location of activities: -----

(implementation justification, etc.)

10 Short information on local and regional environmental references:

10.1 Physical Characteristics for implementation of activities:

Plains

Plateau

Valley

Mountains

10.2 Principal Ecosystems:

River

Lake
Sea
Land

10.3 Location/zone:

Coastal Zone
Continental Zone
Island

10.4 Type of principal vegetation:

Flora
Savana
Others (specify)

10.5 Land use:

Residential
Industrial
Protected area
Others (specify)

10.6 Principal existing infrastructures in the protect area: -----

11 Complementary Information:

Location map
Other information related to the project activities

20 APPENDIX 3: PROPOSED ENVIRONMENTAL AND SOCIAL SCREENING FORM

SECTION A: Contact Details

Person Responsible for Filling out the Form	
Name	
Position	Senior Environmental Specialist
Contact details	
Date	
Signature	
Person Responsible for Checking/Validation	
Name	
Position	
Contact details	
Date	
Signature	

SECTION B: Project Description

Subproject name		
BID Nr. (if applicable)		
Name of the Contractor (if applicable)		
Estimated cost (if applicable)		
Location of the subproject		Attached Site Map Y <input type="checkbox"/> N <input type="checkbox"/>
Type and scale of the subproject		
Approximate size of the subproject in land area		

SECTION C: Environmental and Social Sensitivity of the Subproject Area

1	Biodiversity and Natural Resources	Answer (Yes/No)
1.1	Are there any environmentally sensitive areas (intact natural forest, rivers or wetland) or threatened species (specify below) that could be adversely affected by the subproject?	
1.2	Is the subproject area within/adjacent to any government designated protected area (national park or reserve)?	
1.3	Would the proposed subproject result in the conversion or degradation of natural habitat or critical habitat?	
1.4	Are there areas of possible geological or soil instability (susceptible to erosion, landslide and subsidence)?	
1.5	Does the subproject pose a risk of degrading soils?	
1.6	Does the subproject involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction.</i>	
1.7	Will the subproject (during construction or operation) use large amounts of local natural resources such as water, timber, gravel from river beds, stones, especially any resources which are non-renewable, or which exists in small quantity?	

2	Pollution Prevention and Resource Efficiency	Answer (Yes/No)
2.1	Will the subproject involve the use, storage, transport or handling of substances or materials which could be harmful to human health or environment?	
2.2	Would the proposed project result in the generation of waste that cannot be recovered, reused, or disposed of in an environmentally and socially sound manner?	
2.3	Will the subproject potentially result in the generation of waste (both hazardous and non-hazardous)?	
2.4	Will the subproject involve the handling and/or use of chemicals and hazardous materials subject to international action bans or phase-outs? <i>For example, asbestos containing material (ACMs), PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants, or the Montreal Protocol.</i>	
2.5	Is there a potential for the release, in the environment, of hazardous materials resulting from their production, transportation, handling, storage and use for project activities?	
2.6	Will the subproject produce waste water that require drainage?	
2.7	Is the subproject located near water sources used for domestic consumption such as boreholes, water wells or springs?	
2.8	Does the subproject include activities that require significant consumption of raw materials, energy, and/or water?	
3	Loss of Assets and Demographic Issues	Answer (Yes/No)
3.1	Will the subproject result in displacement, household infrastructure, loss of assets, or access to assets?	
3.2	Will the subproject result in the permanent or temporary loss of income sources or means of livelihood (such as crops, fruit trees, etc.),	
3.3	Will the subproject result in disproportionate impacts on the poor, women and children or other vulnerable groups?	
3.4	Is the subproject likely to result in a substantial temporary induced Labor Influx of people to the subproject area?	
3.5	Is the subproject likely to increase demand and competition for local social and health services due to the potential influx of workers and followers?	
3.6	Based upon on the available information, exist in the subproject area known prevalence of gender-based violence (GBV) and child and forced labor?	
4	Historical, Archaeological or Cultural Sites	Answer (Yes/No)
4.1	Will the proposed subproject result in interventions that would potentially adversely impact sites, structures, or objects with historical, archaeological, or cultural values?	
4.2	Will the subproject involve extensive excavation?	
5	Community and Workers Health and Safety	Answer (Yes/No)
5.1	Will the subproject require the use of heavy machinery or equipment?	
5.2	Is the subproject located in an area where there have already been demining, accidents or confrontation during the civil war?	
5.3	Does the subproject include emergency plans to control accidental spills and prevent sewerage overflow?	
5.4	Would elements of the subproject construction, operation, or decommissioning pose potential safety risks to local communities?	
5.5	Does the subproject have the potential to lead to risks of accident for workers and communities?	
5.6	Would the subproject result in potential increased health risks (e.g. from vector-borne diseases or communicable infections such as STD and HIV/AIDS)?	

If all answers are “NO”, then there is no need for further action in addition to the Environmental and Social Management Plan (ESMP) which should incorporate health and safety guidelines.	
If there is at least one “YES”, to the questions on Section C, then describe the recommended actions for each of the YES answer.	
Question number	Recommended actions

SECTION D: Proposed Actions

SECTION E: Environmental and Social Screening Outcome

Select from the following the appropriate category for the subproject based on the answers provided on Section C	
<input type="checkbox"/> Category A	The proposed subproject is likely to have significant adverse environmental and social impacts that are sensitive, diverse, or unprecedented. A full Environmental and Social Impact Assessment (ESIA) will need to be completed during subproject design.
<input type="checkbox"/> Category B	The proposed subproject is likely to have less adverse impacts on human populations or environmentally important areas than those of Category A subprojects. Likely impacts will be site-specific, few in number, and few if any them are irreversible. Mitigation measures can be designed more readily than for Category A subprojects. An Environmental and Social Management Plan (ESMP) will need to be completed during subproject design, including a Health and Safety Plan (HSP).
<input type="checkbox"/> Category C	The proposed subproject is likely to have minimal or no adverse environmental and social impacts. Beyond screening, no further environmental assessment (EA) action is required, although those involving minor civil work activities may still have to develop an ESMP during subproject design which should incorporate health and safety guidelines.

21 APPENDIX 4: ENVIRONMENTAL AND SOCIAL CHECKLIST

For each activity proposed, fill the corresponding section on the checklist;
 Where the response is “YES” in the above Table, reference should be made to the proposed mitigation measures in the Table on section 7.5, describing the relevant mitigation measures listed.

Civil work activity	Issue to be addressed	Yes	No
Construction/rehabilitation	Are there agricultural lands in the proximity of the site (cultivated or non-cultivated lands) or any other natural resources likely to be affected by construction/rehabilitation works? Are there appropriate facilities to handle wastes resulting from the proposed construction/rehabilitation works? Will the construction/rehabilitation works require clearing of vegetation and excavation of soils? Will the use of local construction materials (borrow pit materials for brick manufacturing, need for firewood and timber harvesting) be required during the construction/rehabilitation works? Are there pollution risks of surface and groundwater as a result of the proposed construction/ rehabilitation works?		

22 APPENDIX 5: TERMS OF REFERENCE FOR THE PROPOSED ENVIRONMENTAL OFFICER FOR FIPAG



ENVIRONMENTAL OFFICER (EO): Reporting to the FIPAG Head of Environmental Department the Environment Officer (EO) will serve as the main contact person on environment and social and health and safety issues of FIPAG’s projects’ at the Cities. He shall ensure that the environmental and social mitigation measures (including resettlement) are followed for all FIPAG’s activities. This position will be based in Tete City, and the EO will also be responsible for the Moatize Water Supply project.

Duties:

- Assist FIPAG in identifying and managing: 1) environmental, social, health, and safety impacts of FIPAG projects, 2) relevant environmental requirements per Mozambique environmental law and Donors’ Environmental and Social Safeguard Policies, and 3) ensure the implementation of relevant mitigation measures;
- Ensure compliance of the proposed project activities with relevant Mozambique environmental laws and regulations, and the World Bank Policy on Involuntary Resettlement;
- Provide support to FIPAG’s efforts to obtain environmental licenses from relevant government authorities;
- Organize and manage required sessions for stakeholder’s participation sessions in environmental and social impact issues, in accordance with approved guidelines and procedures;
- Review the contractors’ recommendations and ensure that final reception of goods, works or services and for the corresponding closing of contracts are carried out in full compliance with the environmental management plans;
- Ensure that all Environmental Management Plans, Resettlement Action plans and other environmental and social plans are properly and effectively developed, managed and implemented;
- Ensure that any complaints, related to environmental and social impact issues, arising from the implementation of FIPAG activities are resolved in a timely manner and properly documented.
- Monitor the implementation of the Resettlement Action Plans and ensure effective communication with Project Affected Persons (PAPs);
- Other tasks and responsibilities as requested by the FIPAG General Director.
- Through Supervisor’s Environmental Controller Officer, ensure the implementation, by the contractor, of the environmental, health and safety requirements set out in the project’s EMP;

- Communicate issues of environmental and occupational health and safety to FIPAG manager at city level highlighting the need to address specific urgent environmental, health and safety measures;
- Maintain liaison with the Supervisor's teams and project managers, ensuring that they are informed about environmental and health and safety management aspects related to their projects;
- Ensure that non-compliance with the requirements with environmental, health and safety are report to FIPAG by the Supervisor;
- Work with the Supervisors' Environmental Controller to establish procedures for internal and external communication, providing information on emergency and activities taken – This can also be used by FIPAG's communication specialist for messaging of important project's issues to stakeholders;
- Prepare regular reports regarding the projects' performance with regards to implementation of environmental, health and safety management requirements as established on the EMPs;
- Carry out technical site audits/monitoring and point out any non-conformity with the implementation of environmental, health and safety requirements to the Supervisors, and follow-up actions for corrections;
- In coordination with the Supervisor's Environmental Controller Officer, analyze the Works Program and collaborate in the programming and implementation of the environmental, health and safety activities proposed by the Contractors;
- Ensure that the Supervisors are undertaking the required control of safety conditions of materials and equipment arriving at the project site;
- In coordination with Supervisors, ensure the supply and management of stocks of Collective Protective Equipment (CPE) and Personal Protective Equipment (PPE);
- Take corrective measures or organize their implementation in order to eliminate risks;
- Co-ordinate the procedures to be taken in the event of a serious accidents;

Qualifications and Experience:

- Advanced degree in Natural or Social Science (academic degree in water/environment related fields is preferable);
- At least 5 years of experience with environmental/social impact assessment and mitigation management;
- Experience with the implementation of infrastructure (roads/water/sanitation construction/rehabilitation) projects required;
- Familiarity with Mozambican environmental laws and regulations and resettlement practices;
- Proven experience in undertaking and reviewing environmental and social impact assessments;
- Experience with overseeing resettlement activities and familiarity with implementing the World Bank Policy on Involuntary Resettlement (OP 4.12) is highly desirable;
- Ability to interact constructively with both technical and construction experts and Project Affected People is required;
- Written and verbal fluency in both Portuguese and English is required;

- Responsible and flexible attitude and capable of working with minimal supervision, including ability to handle a variety of tasks and demands;
- Computer skills (MS office, internet).

All applications for this position must be submitted via postal mail or e-mail to:

Applications must be received no later than **XXXX, XXXX, XXX**. Preference will be given to individuals working or living in Mozambique. To receive consideration, applications must include i) a CV that demonstrates the applicant's qualifications and experience, and ii) a cover letter (one page maximum) explaining what the applicant foresees as the challenges of the position and how their experience and education would allow them to meet those challenges. All applications will be treated in the strictest confidence. Only applicants selected for interviews will be contacted.

23 APPENDIX 6: GRIEVANCE REDRESS MECHANISMS

23.1 Grievance mechanisms

Conflicts and grievances do arise from proposed projects such as WASIS II and their associated subprojects. This can arise from poor subproject planning and implementation processes as a result of poor communication, inadequate or lack of consultation, inadequate flow of accurate information, or restrictions that may be imposed on project affected people.

Communities must be involved in awareness-raising and training concerning their rights and obligations; how to obtain legal advice and representation, and how to seek redress against what they regard as unfair practices.

The design, implementation, monitoring and evaluation of all aspects of WASIS II subprojects should be legitimate; accessible; predictable; equitable; transparent; rights-compatible; enable continuous learning; and be based on engagement and dialogue. This encompasses the design and implementation of a local communication strategy stressing awareness-raising activities about the sub-project(s) and resettlement procedures and entitlements where relevant.

A grievance redress mechanism should be implemented from the beginning of any WASIS II subproject. At first there will be a need to create this capacity, to actively capture and anticipate grievances. This should continue during the operational phase, which is anticipated to be more passive. A stakeholder engagement plan (SEP) should be prepared early in the project and reviewed and approved by FIPAG. Ideally this should be incorporated in the public participation process for the project. This document should be adjusted throughout the process of project implementation as more issues become known. The SEP must consider the inclusion of women groups and representatives of other vulnerable populations (elders, youth and disabled). It is important that consultations be initiated early in the project which provides stakeholders and members of the public adequate time to comment, voice concerns, or share ideas that may enhance the project. A grievance mechanism should be developed during project inception and shared with stakeholders and community members, so they can share concerns without fear of reprisals.

The main objective of stakeholder engagement and public participation is to ensure that the concerns and issues raised by the Interested and Affected Parties, organizations or individuals are taken into account during the ESIA, allowing for stakeholders to discuss proposed subprojects under WASIS II and the results of the environmental and social studies. The Public Participation Process grants an open channel of communication between the public, appointed Service Providers and contractors, FIPAG/MITADER, which will be of extreme importance in managing potential conflicts.

Special attention should be paid to women, the poor and most vulnerable groups in affected households as well as in host communities to ensure they understand their rights and entitlements. This may be assisted by the use of women social facilitators and ensuring women are included in the local Resettlement Committees and with other relevant vulnerable groups in Monitoring Commissions.

Language should not be an impediment to complainants, and facilitators should be able to work in Portuguese and other relevant local languages used in the central region of the country (Shona, Chimanyika, Ndebele, Chitewe, and Sena). Presentation of complaints should not incur undue costs to the complainants. Complaints presented at FIPAG level would be most effectively managed if written. It is recommended that mechanisms for receipt of complaints are always focused at the most local level possible before transmission to FIPAG or project steering level.

Project affected people with grievances concerning proposed or actual resettlement and/or compensation arrangements should be able to present these to trusted leaders who can act as linkages as necessary to others who may be needed to resolve the problems. Grievances can initially be presented in a local language for local redress to a local influence leader or the local Resettlement Committee - where this has been created. Traditional and other influence leaders should be members of the local Resettlement Committee and be involved in creating awareness and resolving local problems. Some social, land and resource-use related conflicts may be resolved by traditional and other local leaders. If the issues are beyond their limits of authority, they may be passed on to the zone secretaries and local authorities or District Government for resolution if appropriate.

If issues and grievances are concerned with relationships with secondary or external stakeholders, and/ or are outside the capacity of the community or local authorities to resolve, they may be communicated to the social facilitator, who is likely to have earned a certain degree of trust locally for assistance with resolution. This channel may assist in local resolution or provide a rapid channel for timely resolution involving the Service Provider, and if necessary or ultimately to the Project Authority (FIPAG).

Decisions on grievance redress and communication of these to the complainant should be timely at all levels. This will promote greater trust in the communication systems and improve attitudes about the project within the community. Information should normally be returned to the community using the same channels as used for its initial transmission. The results should be communicated to all other levels and relevant structures at the same time for coordination and awareness purposes.

In cases where conflicts or complaints are directed against local government agents or sub-project management, whenever possible, project affected people and communities will be encouraged to resolve conflicts harmoniously through informal mediation by external agencies or other government officers.

When disputes cannot be resolved informally, more formal mechanisms will be required. Unresolved issues, dissatisfaction with solutions or if a community enters into conflict with a private-sector developer, may require formal recourse to the District Administrator. Failing resolution there, it will be taken to the Provincial Governor or Ministry with titular responsibility for the investment.

23.1.1 Administrative and Legal Procedures

Provisions to appeal with sectoral grievances to higher levels of government such as National Directors and Ministers exist in most legislation. Decisions made by the District or Provincial Government leaders can be appealed in a civil court or the Administrative Court. Various actions in the course of resettlement may lead to disputes, for instance, poor construction quality of facilities.

In general, should any party be dissatisfied, the grieved party may take the complaint to a civil court where it will be dealt with under Mozambican law. In principle, a community can take a contractor or licensee to court for not abiding by the terms of an EA. Ultimately, though not usually practiced, all citizens have the right to address complaints to the Public Prosecutor, the institution responsible for ensuring the law is correctly applied, particularly in the elaboration of territorial management instruments and their implementation.

Municipality and some sectoral government ministries represented by respective national and provincial directorates or departments will apply legally recognized procedures during planning and implementing of resettlement. These will include:

- District Governments approve land-use plans in their territory and are responsible for ensuring compliance;
- The Provincial Governor or with the Ministry for Education and Culture may declare historical-cultural use zones in the province;
- The WASIS II Project Coordination Team/Project Manager is the Project Authority. This office is responsible for ensuring compliance concerning public consultations and disclosures;
- PCTs shall be responsible for ensuring EAs identify and mitigate potential impacts, and implementers comply with abbreviated RAP orientations;
- Local authorities, zone secretaries and traditional leaders will identify available land where compensation shall include land. The local leaders will also take an important role in promoting local level resolution of grievances of project affected people;
- The DPA/SPGC prepares, and the Provincial Governor approves DUATs and the District Administrator verifies community delimitations before SPGC issues certificate. They can also revoke rights for non-compliance with tax and development regulations.
- FIPAG or its appointed specialists shall provide technical services for the identification and evaluation of project affected people's assets that may be affected by resettlement/identified projects.

Particular attention during planning and implementation must be paid to the following principles outlined in the Constitution, and environmental, land-use and physical planning laws and regulations:

- Consultations with local authorities and project affected people must occur before and during project implementation;
- Notification of intentions or plans to acquire land use rights must be made public as required by the laws and this Framework;

- Assets and other losses must be valued. Determination of compensation will be guided by Mozambican law, Ministry of Agriculture and Food Security and Ministry of Public Works, Housing and Water Resources norms and World Bank's O.P. 4.12 on Involuntary Resettlement;
- Determination of alternative livelihood measures will be made by the project affected people, with the assistance of FIPAG or contracted Service Provider and other agencies with expertise in the area;
- Full compensation must be paid to project affected people, and alternative livelihood measures initiated, before WASIS II related development activities begin in a sub-project area.

23.1.2 Steps for Grievance Redress Mechanisms

- **Step 0:** Potential PAP grievance, documented in a form (to be) directed to the Service (SP) Provider appointed by FIPAG. If the PAP needs help filling-out the form, the Environmental and Social Safeguard specialist will offer assistance. If during the process it appears that the PAP did not understand the entitlement, this can be explained. SP will not discourage for filing a grievance. SP will have to capture any potential grievances in the Grievance/Issues Register.
- **Step 1:** FIPAG or appointed PCT (who will comprise representatives from all institutions) makes first judgment to accept or reject grievance. If accepted, they recommend a solution
- **Step 2:** If PAP is not satisfied with Step 1 decision, the case shall be forwarded to the Head of the Administrative Post with a preliminary report prepared by the ESIA/ESMP/RAP SP. The report should have the details of grievance and hearing date and decision of the resettlement committee.
- **Step 3:** If PAP is not satisfied with step 2 decision, the case shall be forwarded to District Advisory Council. The grievance shall be forwarded with all the documented details of the case to date.
- **Step 4:** It is assumed that all the cases shall be solved at District Advisory Council. However, there are cases that may remain unresolved. For such cases, the PAP shall have the option to refer his/her case to District Administrator for final amicable solution. The complainant may also be advised to submit the complaint through local Judicial System or other appropriate Government mechanism.

Upon completion of the process at each level, the GRM responsible staff shall take the necessary actions to implement the agreements reached within established time. The monitoring of grievances is an important task under the GRM system and shall be focused on use, efficiency and effectiveness (level of satisfaction of users and the community in general). At community level, local authorities and leaders will be the main points of support involved in participatory monitoring.

Communities and individuals affected by the Project may also submit complaints for rapid review to the World Bank Grievance Redress Service (GRS). For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit

<http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>.

24 APPENDIX 7: GENERIC TOR FOR AN ESIA

This Terms of Reference for the ESIA are indicative only and should be revised and adopted for specific proposed subproject.

1. BACKGROUND

1.1 General

Brief description of the project on which the subproject is anchored, indicating the main components, with emphasis on the one that finances the subproject for which the ESIA will be developed.

1.2 Description of the Proposed Subproject

Detailed description of the proposed subproject, including its proposed location, construction technology, raw material to be used, employment, etc.

2. OBJECTIVE

The main objective of the assignment is to develop an Environmental and Social Impact Assessment (ESIA) for the proposed subproject.

The ESIA will achieve the following specific objectives:

- (i) Identify all potential adverse environmental and social impacts of subproject, for the design, construction and operation phase, including recommend measures for impact avoidance, reduce and mitigation;
- (ii) Prepare an Environmental and Social Impact Assessment (ESIA) report which include an Environmental and Social Management Plan (ESMP), Health and Safety Plan, Waste Management Plan;
- (iii) Conduct public consultations: at least two public consultations, the first at the scope and baseline analysis stage; the second public consultation when the ESIA preliminary report is concluded. Public consultation shall be in compliance with national ESIA regulation.

3. SCOPE OF THE CONSULTANCY SERVICES

The consultant will be required to undertake the following tasks:

Task 1. Introduction

Objective of the ESIA
ESIA Background
ESIA Methodology
Structure of the ESIA

Task 2. Project Description

Concisely describes the proposed subproject, including any offsite investments that may be required. It should also clearly define and designate the project area of influence (direct, indirect, and regional if applicable) that is covered by the ESIA. Includes a map showing the project site and the project's area of influence.

Task 3. Policy, Legal, and Administrative Framework

Discusses the national policy, legal, and administrative framework within which the environmental assessment (EA) is carried out. Explains the environmental requirements of the World Bank Safeguards Policies. Identifies relevant international environmental agreements to which the country is a party. Describe applicable international guidelines applicable to the subproject context. The consultant shall also identify and describe the pertinent regulations governing environmental quality, health and safety, protection of sensitive areas, land use control at the national and local levels, land laws/regulations, laws on gender, child labor, ecological and socio-economic issues, labor influx and conditions, consultation and stakeholder engagement.

Task 4. Environmental and Social Baseline

In order to predict potential impacts, the consultant should fully describe the relevant physical, biological, and socioeconomic conditions of the subproject area. It should be indicated the accuracy, reliability, and sources of the data. The following are the minimum required elements:

Physical environment: Climate, Geomorphology, Geology, Soil, Hydrogeology, Water Resources and Water Quality, Air quality, Sound Environment, Vibrations, Infrastructures (Electric Power Grid, Current Water Supply Network, Current Wastewater Network, Waste Management, Roads)

Biological environment and natural ecosystems: Ecology, Fauna and Flora, Protected Areas, Sensitive Habitats and Landscape.

Socioeconomic environment: Socio-cultural Component (Population and Settlement, Employment), Economic Activities, Fishing, Industry, Commerce and tourism and hotel industry, Educational Institutions, Public Health, Cultural and Historical Heritage.

Land Use and land tenure

Task 5. Impact Assessment

Predicts and assesses impacts for the construction and operation phases. Both positive and negative impacts in quantitative terms to the extent possible, including cumulative impacts;

The direct or indirect effect on natural habitats, fauna and flora, hydrographic processes, farmland, domestic buildings, cultural sites and/or natural resources used by local communities will be evaluated;

The description and quantification of the potential environmental and social impacts shall be based on scientific and objective methods.

Task 6. Mitigation Measures

Based on the findings, the consultant should identify mitigation measures to avoid, reduce or eliminate the negative effects of the project and increase the positive impacts. Identifies any residual negative impacts that cannot be mitigated. Explores opportunities for environmental enhancement. Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions, and specifies topics that do not require further attention. Define specific mitigation measures for potential risks related to influx of labour such as communicable diseases, sexual harassment, gender-based violence (GBV), violence against children (VAC), local inflation of prices, illicit behavior and crime, etc.

Task 7. Analysis of Alternatives

An alternatives assessment should be made for the subproject intervention area, design, construction techniques/technology and operational procedures. For each of the alternatives

assessed, quantifies the environmental impacts to the extent possible, and estimate economic values (cost) where feasible. States the basis for selecting the particular project design alternative and justifies recommended GHG emission levels and approaches to pollution prevention and abatement.

Task 8. Environmental and Social Management Plan and Monitoring Program

An Environmental and Social Management Plan (ESMP) including monitoring program, should be designed to control the impacts arising from the construction and operation phases. The ESMP should consider both generic construction measures and site-specific measures to address impacts on sensitive environmental receptors. It should also include all other sub-plans that are sub-sets of the ESMP such as, Health and Safety plan, Waste Management plan, and an Emergency and Contingency plan.

The monitoring is critical for the successful implementation of the ESMP and ensure that construction activities are in compliance with the requirements established for all levels and stages of the subproject implementation. It also helps identify how well mitigation measures are working. The monitoring program shall define environmental and social performance indicators as well as identify what information should be collected, how, where and how often.

Task 9. Public Consultation

The consultant will be required to conduct at least two public consultation: at least two public consultations, the first at the scope and baseline analysis stage; the second public consultation when the ESIA preliminary report is concluded. Public consultation shall be in compliance with national ESIA regulation.

Task 10. Preparation of the ESIA Report

The ESIA report should include the following minimum content:

- Non-technical summary;
- Project description;
- Definition of the project area of influence (direct and indirect), considering, in all cases, the human populations, other living beings and the hydrographic basin in which the project is located;
- Policy, legal, and administrative framework;
- Description of the environmental and social baseline of the project area of influence;
- Environmental and social impacts that may result from the project implementation, considering the construction and operation phases;
- Potential changes that may be induced by the project in relation to:
 - working conditions, including hiring and employment practices, health and safety of workers, treatment of temporary and migrant workers, and health prevention programs for workers including malaria, HIV/AIDS and other infectious and water borne diseases;
 - community health and safety issues, including: traffic, dust, noise, labour influx, gender issues including gender-based-violence (GBV) and violence against children (VAC), sexual harassment and discrimination; impacts and barriers to access affecting vulnerable groups.

- Impacts of work site, borrow pits and waste disposal sites and any project ancillary facilities and activities;
- Impacts of potential restriction of access to certain areas due to the construction works, and how to manage these impacts;
- Analysis of alternatives in terms of project design, construction techniques/technology, and operational procedures;
- Mitigation measures to be applied to the project considering national and international health and safety standards (mainly the WBG General EHS Guidelines and the Industry Sector Guidelines for Water and Sanitation);
- Mitigation measures to avoid, reduce or eliminate potential identified negative impacts;
- Specific measures related to traffic management, community and workers health and safety - including HIV and other infectious and sexually transmitted diseases, and community awareness campaigns on the project, sanitation practices and workers relations with local community, should be included in the ESMP which is part of the ESIA report;
- Public consultation report including a summary of the comments made during the public consultation process.

5. QUALIFICATION REQUIREMENTS AND LEVEL OF EFFORT

The Consultant shall be a reputable Consultancy Firm with experience on Environmental and Social Impact Assessment. In particular, the Consultancy Firm shall be fully conversant with World Bank environmental and social safeguards. The firm must be accredited by MITADER in order to process the Environmental License.

The Consultant shall propose appropriate full time and part-time staff and time inputs for the assignment, but it is anticipated that the following key personnel will be required. The minimum requirements for key staff of this provision of services shall be as follows:

- Environmental and Social Specialist with adequate qualifications and sufficient experience to coordinate the elaboration of the Environmental and Social Impact Assessment;
- Stakeholder Engagement Specialist, with knowledge of the local dialects, which will promote stakeholder engagement during public consultation;
- Occupational Health and Safety specialist with proven specific experience in similar works;
- [Indicate other required specialists].

6. DELIVERABLES AND OUTPUTS

The Consultant is expected to submit the following specific outputs:

- (i) Environmental and Social Impact Assessment (ESIA) report;
- (ii) Environmental and Social Management Plan (ESMP), including a Work Conditions and Labour Influx Management guidelines for the subproject area, template of an ESHS Code of Conduct, a Stakeholder Engagement guidelines, and Chance Finds Procedures to be followed by the Contractor during the construction phase;
- (iii) Health and Safety Plan;
- (iv) Waste Management Plan;
- (v) Emergency and Contingency Plan.

The ESIA and respective plans indicated above shall be prepared in accordance with the ESIA environmental legislation and the applicable WB safeguard policies and guidelines. The reports shall be in both Portuguese and English and be clear and concise and include readable maps, diagrams and pictures. The reports shall be in a format acceptable to local environmental agency (MITADER).